

ROLE OF AYURVEDA IN CHILDHOOD OBESITY: A NARRATIVE REVIEW.

Milind Godbole,¹ Kalpana Jadhav,² Archana Ingole-Patil,^{3*} Abhijit Jagtap.⁴

1. MD Swasthawritta, Dean, YACPGT & RC, Kodoli, Kolhapur, Maharashtra, India.
2. MD Swasthawritta, HOD, Dept. of Swasthawritta, YACPGT & RC, Kodoli, Kolhapur, Maharashtra, India.
3. PG Scholar, Dept. of Swasthawritta, YACPGT & RC, Kodoli, Kolhapur, Maharashtra, India.
4. MBBS, MHA, MPH. Coordinator, School of Allied Health Science, Punyashlok Ahilyadevi Holkar Solapur University.

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ABSTRACT

Introduction: Obesity in children is a serious public health problem not only of western countries but in Indian context too. Familial predisposition, physical inactivity, changed dietary habits and patterns are most important causes of high prevalence of childhood obesity. Although obesity is hereditary, that does not mean that all the children in a family will be overweight or obese. The most important reasons for obesity epidemic are the current pattern of high energy food intake along with limited energy expenditure and other environmental and lifestyle factors. **Materials & Methods:** Extensive literature review done using ancient Ayurvedic texts such as Samhita, internet data bases such as Pub Med, Scopus, Cochrane, Google Scholar, DHARA etc. **Discussion:** Sthaulya is the Ayurvedic term for obesity. As per Charak Samhita, *Sthaulya* is *Ashtouninditiya*. Children who are obese are likely to be obese in their adulthood and are prone for lifestyle disease. Modern medicine has its own limitation in controlling the obesity which necessitates adoption of Ayurvedic methods of obesity treatment and control. **Conclusion:** Research gap exists with special reference to use of Ayurvedic methods for management of childhood obesity. Ayurvedic concepts like *Yoga*, *Dincharya* and *Ahar-Vihar* plays an important role in prevention of childhood obesity and these should be tested using modern research methods.

Keywords: Childhood Obesity, Ayurveda, *Sthaulya*, *Yoga*, *Ahar-Vihar*.

1. INTRODUCTION

Obesity – Comparison of Modern Concepts V/s Ayurvedic Concept

Obesity is a condition where there is an abnormal growth of the adipose tissues (Meda) due to enlargement of fat cell size (hypertrophic obesity) or rise in the number of fat cells (hyperplastic obesity), or combination of both.¹ Obesity is commonly expressed in terms of Body Mass Index (BMI). Body mass index is an index used to classify obesity on basis of height and weight. It is obtained by dividing weight in kilograms by height in square meters.

As per World Health Organization, a BMI over 25 is considered as overweight. Further this is been classified as Pre-obese (BMI between 25-29.99), Class 1 Obese (BMI between 30-34.99), Class 2 Obese (BMI between 35-39.99) and Class 3 Obese (BMI ≥ 40).² Childhood obesity is body mass index at or above 95th percentile for children of same age and sex.³ Childhood obesity predisposes an individual to number of additional problems in the later life such as hyperinsulinemia, poor glucose tolerance, high risk for type 2 diabetes, hypertension, CVDs, sleep apnoea etc. Once thought as a lifestyle problem, overweight and obesity are now con-

*Corresponding Author: Archana Ingole-Patil. Email: archuabhijagtap@gmail.com.

sidered as disease and both are major risk factors for the development of dangerous chronic diseases such as diabetes mellitus, cardiovascular diseases including ischemic heart disease, stroke and peripheral vascular diseases, malignancies and mental health problems such as depression. The roots of obesity in adulthood are enrooted in childhood. It is estimated that almost ten percent of world's school going population is either overweight or obese.⁴ Obesity in childhood is associated with higher chances of obesity, premature death and disability in adulthood.

As per *Ayurveda*, *Vikrita vriddhi* or abnormal increase in *Medo Dhatu* (fatty tissue) is called as *Sthaulya* or Obesity.³ There is no direct mention of childhood obesity in classic ayurvedic texts. *Ayurveda* describes *Sthaulya* as *Santarpanottha Vikara* which means obesity is a condition caused due to over nourishment. Acharya Charak has described *Sthaulya* as one of the *Ashta Nindita Purusha* (Obesity as one of the eight physical characteristics that is not normal). *Sthaulya* is characterized by deposition of *Meda* over hips, buttocks and abdomen. *Sthaulya* is responsible for reducing lifespan (*ayushya rhas*) as per *Ayurveda*.

2. PROBLEM STATEMENT

2.1. Obesity in Adults

According to WHO technical report, obesity is a chronic disease. Fast growing world economy has caused changes in dietary patterns worldwide. The consumption of energy dense food is increased and is conjugated with decline in physical activity resulting in decreased energy expenditure and contributing to development of obesity. Recent review of literature has reported that worldwide more than 1.9 billion adults are overweight and 650 million are obese. Approximately 2.8 million deaths are reported as a result of being overweight or obese. Due to unhealthy food habits, sedentary lifestyle, lack of health care services and financial support, the developing countries are facing high risk of obesity and their adverse consequences (i.e. diabetes, ischemic heart disease,

etc). In India, more than 135 million individuals were affected by obesity. The prevalence of obesity in India varies due to age, gender, geographical environment, socio-economic status, etc. As per ICMR-INDIAB study 2015, in India the prevalence of obesity varies from 11.8% to 31.3%. This high variability in prevalence is seen due to variations in different demographic variables such as age, gender, geographical environment and socioeconomic status etc. In India abdominal obesity is one of the major risk factors for cardiovascular diseases (CVDs).⁵

2.2 Childhood Obesity

A large body of literature is available pertaining to obesity prevalence in adults in Indian population but the data on childhood obesity is lacking. There have been few attempts made in various settings to assess the prevalence of childhood obesity but all these attempts are done mostly in urban settings. A study conducted to assess the awareness of lifestyle diseases associated risk factors in school going children in Delhi found that 21% students were overweight and obese.⁶ Another study done in school going children in Union Territory of Puducherry found prevalence of obesity and overweight among the school going children in the age group of 6-12 years was 8.66% and 4.69% respectively.⁷ Similar study conducted in urban Bareilly (UP) showed obesity prevalence among the school going adolescents was 7.6%.⁸ Another study done in Ludhiana showed prevalence of 3.4% and 12.7% of obesity and overweight respectively.⁹ The prevalence of obesity/overweight among pediatric population of private schools of Chennai was 26.4% and in government school was 4.6%.¹⁰ A recent study done in two private and two government schools in Mumbai showed the prevalence of obesity/overweight was 25.3%.¹¹ All these studies were done in urban settings and it is natural that there is high prevalence of obesity and overweight among the urban children as they are more exposed to the energy dense food and declined physical activity. On the contrary a systematic review done by Ranjani and colleagues shows that the prevalence of over-

weight and obesity in children as well as adolescents are increasing both in the higher socio-economic groups as well as lower socio-economic groups.¹²

3. CAUSES OF OBESITY

As per modern medicine concept, obesity is a result of complex multi-factorial causes and could not be attributed to a single specific cause.¹ These causes vary from genetic factors to lifestyle related factors. Genetic factors include genetic predisposition or familial inheritance of the obesity. Lifestyle related factors such as excess intake of high energy rich food to physical inactivity contributes to development of obesity. Modern day kids are exposed to fast foods and soft drinks with artificial sweeteners which are energy dense food. This energy dense foods are described in Ayurvedic texts as Meda potentiating diet (*Guru, Snigdha, Madhur, shit Ahar* in excess quantities). Table 1 describes causes of obesity (*Sthaulya*) as per Ayurvedic concept and its correlate as per modern medicine concepts.

Modern era children are overexposed to many of the factors (Ref. Table 1). With emergence of smart phones and social media screen time (using smart phone, gadgets. Watching television) for kids is increased resulting in lack of physical activity (*Avyayam*). Modern trends of fad diets such as burgers, pizzas and soft drinks which are energy dense food (*Madhur, Guru Ahar*) are making the children prone to develop *Sthaulya*. Late night leisure activities like watching televisions, playing mobile games is resulting in lack of adequate sleep and laziness in daytime (*Diwaswap* and *Sukh shayya*). Modern day trend of nuclear families is responsible for over pampering of kids and these kids are not exposed to any worries and tensions. This results in *Achintaya* and *Harshanityatva* and causes *Sthaulya*. Problematic social trends that are responsible for development of *Sthaulya* in children are described in Box 1.

4. PATHOGENESIS OF CHILDHOOD OBESITY

As per modern concept obesity is a result of increase in either number of adipocytes or increase in volume of adipocytes. Adipocytes are the principle energy stores of the human body. They are found in fetus after 14th week of gestation. At birth, the adipose tissue amounts near about 13% of body mass of infant and it doubles up to near about 28% by the end of first year of life. This is normal weight gain. This period is termed as 'First Filling Period'. This first filling period is followed by a reduction in fat proportion over next 6-10 years and this period is termed as 'First Stretching Period'. Second filling period starts at the onset of puberty and followed by second stretching period. Final filling period starts around late adolescence and continue up to 16-20 years of life. During the first filling period the fat accumulation is largely by means of increased volume of adipocytes. During second filling period there is increase in number of adipocytes without significant change in volume of adipocytes. Adipocytes consist of insulin receptors. The insulin stimulates glucose uptake and lipogenesis as well as to inhibit lipolysis. Many factors related to intra-uterine fetal environment play a role in development of obesity. These include maternal smoking, maternal diabetes which can cause offspring with increased birth weight and later on development of childhood obesity. This should be remembered while designing a childhood obesity prevention program. Box 1 illustrates the list of children who are at risk of developing childhood obesity.

As per Ayurveda, abnormal composition of *Medodhatu* results in *Medoroga*. This happens due to derangement in *Agni* (digestive power) leading to *Ama* production which disturbs the *Dhatvagni* of *Medodhatu* and inhibits the proper formation of *Dhatu*. *Medodhatu* accumulates in body causing *Sthaulya*. Increased deposition of *Medodhatu* causes disturbances of *Vata* resulting in increased appetite of the patients. This increased appetite leads to increased intake of energy rich food and thus this vicious cycle continues to cause more accumulation of *Medodhatu* and ultimately to obesity.

5. SIGNS AND SYMPTOMS OF OBESITY

Excess weight gain is the first sign of development of obesity. Excess weight of height and weight for age are the two criteria used for the confirmation of obesity. Charak has various *Rupa* (signs and symptoms of obesity). The symptoms described by Charak and its modern correlates are described in Table 2.

6. PROBLEMS ASSOCIATED WITH CHILDHOOD OBESITY

Childhood obesity results in number of physical and mental health problems. Obesity affects almost every system and predisposes a child to number of health issues in later life or adulthood. Table 3 summarizes the consequences associated with childhood obesity.

7. MANAGEMENT OF CHILDHOOD OBESITY AND NEED OF AYURVEDIC APPROACH

Modern medicine offers only two ways to manage the obesity namely Pharmacotherapy and Surgery. Pharmacotherapy includes use of modern-day synthetic drugs belonging to different class and having different mode of actions. Commonly used pharmacological agents include food intake suppressors, adrenergic stimulants, beta agonists, lipase inhibitors, non-digestible fat substitutes, hormonal agents etc. All these agents have potential adverse effects and have to be cautiously used in children. Surgical interventions like bariatric surgery are recommended in adults but not in pediatric age group. Thus, modern medicine has its own limitations in management of obesity. Recent trends suggest that modern medicine is emphasizing on preventive approach rather than curative approach towards childhood obesity management. This approach integrates dietary management (reduction in caloric intake) and promoting physical activity (increasing energy expenditure). This approach is also termed as Lifestyle Change Management. Exactly this preventive approach has already been discussed and described by Ayurvedic texts and they could be a potential way to treat the childhood obesity.

Ayurveda is the science of controlling mind and unite with the oneness (*Yoga Chitt Wrutti Nirodha*). Ayurveda offers an integrated way for managing obesity. As per Charaka; *Sthaulya* is comparatively difficult to manage than *Karshya* (emaciation). Ayurvedic management of obesity include three steps namely *Nidan Parivarjan, Shodhan and Shaman*.¹⁶ Out of these; *Nidan Parivarjan* is form of prevention of development of obesity in childhood. It's a form of primary prevention and most useful not only in children but also in adults. *Nidan Parivarjan* includes avoiding the reasons which can cause the development of obesity. It includes strict observance of *Ahar-Vihar-Manas Pathya*. Table 4 highlights important approaches to management of obesity using Ayurveda.

8. YOGASANA AND OBESITY PREVENTION

Yoga is a promising intervention to reduce obesity in children. *Yoga* increases muscle strength, flexibility and stamina. *Yoga* definitely improves health related quality of life. There are different forms of *yoga* but *Iyengar Yoga* has shown beneficial in reducing childhood obesity.¹⁷ *Yoga* is form corresponding to physical activity which is necessary for prevention of development of obesity. *Hathyoga* is also found to be beneficial in prevention of obesity.¹⁸

9. AYURVEDA AND POPULATION BASED APPROACHES TO CHILDHOOD OBESITY PREVENTION

Prevention of disease is done at three broad levels namely individual level, community level and population level. Individual based strategies include individual behavioral and lifestyle changes such as *Ahar-Vihar-Manas pathyapathy*. Community level prevention needs participation of community in designing and developing prevention program. This includes commitments from parents, school & colleges, day care centers towards prevention of development of obesity. Population based strategy needs commitment from government to implement policies that are helpful in prevention of obesity. (Ref. Table 4)



10. CONCLUSION

We have examined modern as well as Ayurvedic concepts of childhood obesity, its causes, pathogenesis, signs and symptoms, management and prevention. Extensive literature review shows that obesity in children is a major public health problem not only worldwide but in Indian context too. It could be prevented by instituting primordial prevention as in cases of pregnant mothers to educate them about the behavioral causes and outcome of it with reference to childhood obesity before they deliver the child. Primary prevention can be instituted at the places where the children spent their maximum time such as schools, nurseries. The preventive approaches use the ayurvedic concepts of *ahar-vihar-manas pathyapathy*. Ayurveda has a great potential to prevent the rising prevalence of childhood obesity and it has an edge over modern medicine in way that it has no side effects.

Implications for Future Research

There are sparse studies done to assess the obesity prevalence in school children in Indian context and research should be done to conduct more studies in this area with large sample size. Very few studies are available depicting the beneficiary effects of yogasana on reduction of body weight and this call for future experimental trials to prove it.

REFERENCES

1. K. Park, Textbook of Preventive Medicine, Bhanot Publisher, 24th Edition, p. 415.
2. W.H.O. (2003), Tech. Rep. Ser. No. 916.
3. Gupta and Kumar, Role of dietary and life-style modifications in sthaulya with special reference to childhood obesity, IAMJ: Vol. 6, Issue 4, April 2018.
4. Lobstein et al, Obesity in children and young people: a crisis in public health, IASO, obesity reviews 5 (Suppl. 1), 4-85.
5. R. Ahirwar, P. Mondal, Prevalence of Obesity in India: A Systematic Review, Diabetes and Metabolic Syndrome: Clinical Re-
6. search & Reviews 13 (2019), 318-321.
7. Tanu Anand et al, Awareness about lifestyle diseases associated risk factors in school going children in Delhi, Journal of Nursing Sciences & Practices, Vol. 1, Issue 1, July 2011, p. 1-9.
8. Mahajan et al, Study of childhood obesity among the school going children aged 6-12 years in Union Territory of Puducherry, Indian Journal of Community Medicine/Vol. 36/Issue 1/ Jan 2011.
9. Syed et al, Study of lifestyle disease risk factors among school going adolescents of urban Bareilly, Uttar Pradesh, India, International Journal of Community Medicine and Public Health/Feb 2017/vol. 4/ Issue 2, p. 516.
10. Aggarwal et al, Prevalence of obesity and overweight in affluent adolescents from Ludhiana, Punjab, Indian Pediatrics, Vol. 45, June 2008.
11. Jagdesan S, Harish R et al, Prevalence of overweight and obesity among school children and adolescents in Chennai, Indian Pediatr 2014, 51: 544-9.
12. Pawar SV et al, Prevalence of overweight and obesity in four schools of South Mumbai, J Clin Diagn Res 2016; 10: OC01-OC02.
13. Ranjani et al, Epidemiology of childhood overweight and obesity in India, A systematic review, Indian J Med Res 143, Feb 2016, p. 160-174.
14. Charak Samhita
15. Ashtang hriday
16. Gujrathi R, Gujrathi J, Managing obesity through Ayurveda, IJBPAS, May 2013, 2 (5): 1188-1198.
17. Minal Mawale et al/Int. J. Res. Ayurveda Pharm. 5(1), Jan-Feb 2014.
18. Hainsworth et al, A pilot study of Iyengar yoga for pediatric obesity: Effects on gait and emotional functioning, Children 2018, 5, 92.
19. Hainsworth et al, Hath Yoga for Pediatric Obesity: A Pilot Study, J Yoga Phys Ther

TABLE / FIGURES**Table 1: Sthaulya Causes as per Ayurvedic and Modern Concepts^{13,14}**

Causes for Sthaulya	Ayurvedic concepts	Modern Medicine Correlates
Aharatmak Ghatak (Dietary Factors)	<i>Adhyashana</i>	Eating food after lunch or dinner
	<i>Atisampurna</i>	Binge eating or eating hurriedly
	<i>Atibrimhana</i>	Excess eating
	<i>Madhur Ahar Sevan</i>	Sweet intake
	<i>Guru Ahar Sevan</i>	Eating heavy meals
	<i>Agnimandya</i>	Weak Digestion
Viharatmak Ghatak (Lifestyle Factors)	<i>Avyayam</i>	Lack of physical exercise
	<i>Avyavaya</i>	Lack of Sexual Activities (Not applicable for childhood obesity)
	<i>Diwaswap</i>	Day time sleeping
	<i>Sukh Shayya</i>	Laziness
	<i>Harshanityatva</i>	Happiness
Manas Ghatak (Psychological Factors)	<i>Achinta</i>	No tension, no anxiety
	<i>Priydarshana</i>	Family, Friends
	<i>Beejdosha</i>	Genetic Predisposition
Anya Ghatak (Other Factors)	<i>Amarasa</i>	Indigestion
	<i>Snigdha Madhur Basti</i>	Enema with oil or sweet drugs
	<i>Tailbhyanga</i>	Oil massage

Table 2: Rupa of Sthaulya¹⁵

Rupa (Signs and Symptoms) of Sthaulya	Modern correlates
<i>Medomamsa Ativriddhi</i>	Excessive growth of fat and muscle tissue
<i>Chala Sphik Udara Stana</i>	Pendulous Buttocks, Abdomen and Breasts
<i>Ayatha Upcharya Utsaha</i>	Disproportionate growth
<i>Javoparodha</i>	Less energy levels- sluggishness/laziness
<i>Krichchra Vyavaya</i>	Difficulty in sexual intercourse/loss of libido
<i>Daurbalya</i>	Weakness/loss of physical strength
<i>Daurgandhya</i>	Body odour/Bad smell
<i>Swedabandha</i>	Excess sweating
<i>Ati Kshudha</i>	Excess hunger

Table 2: Rupa of Sthaulya¹⁵

Rupa (Signs and Symptoms) of Sthaulya	Modern correlates
<i>Ati Pipasa</i>	Excess thirst
<i>Ayushya Rhasa</i>	Reduced life span

Table 3. Consequences of Childhood Obesity⁴

System	Consequences
Cardiovascular	Hypertension Dyslipidemia Ischemic Heart Disease Left ventricular hypertrophy Stroke and peripheral vascular diseases
Endocrinial	Impaired Glucose Tolerance Type 2 Diabetes Mellitus Menstrual Abnormalities Polycystic Ovarian Disease
Pulmonary	Sleep Apnoea Asthma
Gastrointestinal	Cholelithiasis Non-alcoholic fatty liver Gastro Esophageal Reflux
Musculoskeletal	Osteoarthritis, Recurrent Joint Sprains Flat Feet Increased Risk of Fractures
Psychological	Depression, Anxiety Neurosis, Loss of libido, Somatoform Disorders, Attention Sickness Disorders

Table 4 Ayurvedic Management of Sthaulya

Nidan Pari-varjan	<i>Ahar Pathya</i>	Avoid eating food after lunch or dinner Avoid binge eating or eating hurriedly Avoid excess eating Avoid excess sweet intake Avoid eating heavy meals
	<i>Vihar Pathya</i>	Do physical exercise- engage child in playing ground games, doing <i>yogasana</i> etc. Avoid day time sleeping, Go early to bed. Minimize use of vehicles Encourage walking, climbing staircase instead of using lift
	<i>Manas Pathya</i>	Minimize use of gadgets, smart phone Minimize TV watching time Go to bed early and early morning rising Develop a positive behavioral approach

Table 4 Ayurvedic Management of Sthaulya

Shodhan and Shaman has no or very little role in pediatric age group but are effective in prevention and management of obesity in adults

Shodhan	<i>Bahya Shodhan</i> (External Purification Therapy)	<i>Sthaulya Raksha Udvartan</i>
	<i>Abhyantar Shodhan</i>	<i>Vaman, Virechana, Asthapan Basti, Lekhan or Karshana Basti</i>
Shaman	<i>Shaman Chikitsa</i>	<i>Deepan, Pachana, Kshudha Nigraha, Trishna Nigraha, Vyayam, Atapasevan and Marutsevan</i>

Table 5. Population based approach for Childhood Obesity Prevention

Level of Prevention	Responsibility	Approach and Solutions
Individual	Individual	Strict observance of healthy diet, exercise Commitment towards appropriate lifestyle changes
Community	Community	School- Availability of play grounds, Ban fast food from premises, encourage students to have healthy diet, organize awareness sessions, periodic health checkups and counseling, Create opportunity for Yoga education Media- Encourage efforts to curb obesity, ban advertisements of harmful substances, awareness campaign through mass media
Population (National)	Government	Policies pertaining to promotion of health of Students - International Yoga Day on 21 st June Laws related to processed food ban or curb the sales Encourage healthy lifestyle policies in government offices- No vehicle day, Walkathon and Marathons to promote physical activities.

Box 1. Problematic Social Trends causing Childhood Obesity⁴

- ◆ Rise in use of motorized transport
- ◆ Rise in traffic hazards for walkers and cyclists
- ◆ Fewer opportunities for recreational physical activities
- ◆ Increased playing of sedentary games
- ◆ Multiple TV channels round the clock
- ◆ Availability of variety of processed food in large quantities
- ◆ More frequent and widespread food purchasing opportunities through malls and marts
- ◆ Increased use of carbonated soft drinks
- ◆ Frequent hotelling, visits to fast food joints

Box 2: Children at high risk to develop Childhood Obesity⁴

- ◆ Infants born to a diabetic mother, or mother having h/o smoking in antenatal period
- ◆ Infants with high birth weight
- ◆ Children with physical disability
- ◆ Children treated for epilepsy
- ◆ Children treated with Glucocorticoids or other centrally acting drugs
- ◆ Children with eating disorders like bulimia, anorexia
- ◆ Children with psychological problems
- ◆ Adolescents with Type 1 DM
- ◆ Cancer survivors
- ◆ Children with familial h/o obesity

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A REVIEW ON HEALTH APPROACHES OF AYURVEDA IN RATRICHARYA (NIGHT REGIMEN)

*¹Prof. Dr. Milind M. Godbole, ²Prof. Dr. Kalpana K. Jadhav and ³Dr. Siddharth Rajaram Gupta

¹Dean, MD Swasthavritta, Yashwant Ayurvedic College PGT & RC, Kodoli, Tal-Panhala, Dist-Kolhapur.

²Guide & Hod, Swasthavritta and Yoga Department, Yashwant Ayurvedic College PGT & RC, Kodoli, Tal- Panhala, Dist- Kolhapur.

³PG Scholar, Swasthavritta and Yoga Department, Yashwant Ayurvedic College PGT & RC, Kodoli, Tal- Panhala, Dist- Kolhapur.

*Corresponding Author: Prof. Dr. Milind M. Godbole

Dean, MD Swasthavritta, Yashwant Ayurvedic College PGT & RC, Kodoli, Tal-Panhala, Dist-Kolhapur.

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ABSTRACT

In Ayurvedic science of life health (Arogya) is considered as the most vital aspect for the accomplishment of the Purusarth chatustya (Four aims and objectives of life). Health (Arogya) was considered as the prime factor over the four aims and objectives of life. In the present era of wealth and technologies peoples are living their life only to earn money in pursuit of prosperity to live responsible family life but they have left their physical activity, dietary schedule and sleep pattern etc. which leads them to suffer from lifestyle diseases. Ayurveda being a holistic health science emphasizes the importance of healthy lifestyle for the prevention of lifestyle diseases. Ayurveda believes that the sarira (body), indriya (sensory and motor organs), sattva (manas or psyche) and atma (soul) jointly constitute the life principle in each individual. (C.Su.1/42) So, Ayurveda prescribes certain rules for maintaining a healthy state of mind. They are called Sadvritta (ethical regimen). Sad means good and vritta means conduct. This is good conduct for the keeping good or balanced condition of mind. Present paper encompasses various aspects of SADVRITTA (CODE OF CONDUCTS) described in Ayurveda and their application in present scenario for maintenance of good health.

KEYWORDS: Ayurveda, Swasthavritta, Ratricharya.

INTRODUCTION

Acharya Charaka and various ancient texts mentioned that there are four aims and objectives (Purusarth chatustya) of individual's life, Dharma (righteousness, moral values), Artha (prosperity, economic values), Kama (pleasure, psychological values) and Moksha (liberation). The Health (Arogya) is the only tool for the accomplishment of the Purusarth chatustya (Four aims and objectives of life). Health (Arogya) was considered as the prime factor over the four aims and objectives of life. In earlier days, life was not so hectic. It was quite simple and free of too many challenges with healthy environment in comparison to these days. People were healthy as they had to perform all the daily routine activities by their own. But now, in the era of wealth and technologies, life has become comfortable but it has also become hectic and unhealthy because of competition. Now-a-days, use of high-tech machineries and over engagement in official work in pursuit of prosperity to lead responsible family life makes a person less active in both physical and mental level which leads to loss of health. Individuals have to work at least 9 to 10 hours in the offices by just sitting on the chair without any

physical movement. They come to home late night and become too tired to perform any household work or exercise. Again, in the morning they get up late from bed and do some necessary works like bath, brush etc and go to their office. In this way, they live their daily routine only to earn money, not their life for themselves. This leads to various lifestyle diseases, non-communicable diseases (Diabetes, Hypertension, and Dyslipidaemia etc.) and mental disorders. The lack of health prevents them from enjoying the real pleasure of being rich.

A good wealth can be earned anytime using good health. However, good health can never be earned again in life if once destroyed. Health is defined as the state of complete physical, mental, and social wellbeing not merely an absence of disease or infirmity.

The classical textbook of Ayurveda elaborates that the balanced state of the main elements of our body (Dosha and Dhatus), adequate digestion (Agni), proper excretion (Malakriya), blissful condition of Self (Atma), satisfied senses (Indriya) and a happy state of mind (Manas) when encompassed in a person, then he is called as a Healthy

(Swasthya) person.^[2] Ayurveda is the science, which helps to accomplish the advantageous (Hitayu) and disadvantageous (Ahitayu) as well as happy (Sukhayu) and unhappy (Dukhayu) states of life. A vast description of, what is good and bad for life, its measurement and life itself are described in Ayurveda. The science which imparts knowledge about life, its aims and objectives, and the description of happy and unhappy life, useful and harmful life, long and short spans of life and such other material along with their properties and actions as promote and demote is described in the entire treatise.

Ratricarya (Routines of night) – Night covers almost fifty per cent of the whole span of life. In comparison today, it is usually an inactive phase of life. The length of the night is variable, depending upon the seasons. It is longer in the winter, shorter in the summer and moderate in rainy seasons. It starts after sun set when twilight is over and continues till dawn of the day. It can be easily demarcated into early the evening, up to ten p.m., the mid, up to two a.m. and later phase of night up to four a.m. A major portion of the night is mostly passed by sleeping. It is only the early, late evening and the later phase of night which demands care in respect of diet ethics, sexual acts and other regimen of life mainly to keep the body full of strength and vigour for the next coming day's activities. Physiologically, nervous system takes complete rest in night during sound sleep and the circulatory system slower down to some extent. Minimal oxidation and combustion at cellular level, leads maximum recoups of energy in the body. In view of these facts, it is advisable to have a little care of diet, drinks and other activities in certain parts of the night, beside the hours of the sleep.

It is in Astanga Samgrana, Astanga – Hrdaya and Bhavaprakasa and other allied literature which have spoken little bit about the dietetics and other regimen of Ratricarya. The sleeping place should be open and dirt free, protected nearby with faithful attendants. At the time of sleep, head end should be facing to east or South. Magnetic forces of the earth acting upon the body at but not towards the teachers or elders. One should always be religious minded at both the early and late phases of night every stages of life.

The instruction given by vrddha-vagabhata for the regimen of night, if analysed in the light of modern science of today, it elicits many truthful and factual matters for the betterment of the health at both the physical and mental levels. An advice to take light, nutritious and wholesome food, particularly in early part of night i.e. after sunset or during the evening hours, will facilitate easy digestion and keep the gastro intestinal tract unloaded. The thought free and peaceful state of mind will also help in inducing the sound undisturbed sleep free from dreams. The persons, those who are worried, anxious and disturbed minded cannot have good sleep throughout the night and thus are likely to get afflicted with prostrations, headache and uneasiness after

awakening. They physically feel laziness and mentally not concentrated towards their day-to-day work, during day time. Open and dirt free locality for sleep will serve the hygienic principles of open and well ventilated atmospheric situation. This will help in easy and quick exchange of useful and harmful gases being inhaled and exhaled during the time of sleep, respectively. Spacious and comfortable bed has been advocated for the sake of free and undisturbed sleep as short stature and troublesome beds are likely to disturb the same. Direction of sleeping towards south or east, physiologically there will be mild and soothing effect of the magnetic forces of the earth on the brain cells which results sleep into dream free and undisturbed. The prescription of early to bed will provide the chance of early to raise in the morning —makes a man healthy, wealthy and wise.

Actions Contraindicated during Evening Time

Intake of Ahara (food), maithun (sexual intercourse), Nidra (sleep), Sampaatam (reading) and Adhwa gamana (walking) these five actions are contradicted in evening hours. Intake of food produces diseases, sexual acts leads to deformity in the foetus, sleep produces poverty, reading leads to loss of life span and long walk leads to fear. ((Bhav Prakash Pratham 5/275-276).

Meal should be consumed in the first prahara (3 hrs) of night (Bhojanam Prathama Prahara Antare); foods are taken in lesser quantity than afternoon (Kinchit Oonam Samashniyaat) and avoid the food that is difficult to digest (Durjaram Varjayet). (Bhav Prakash Pratham 5/279).

One should not indulge in intercourse during the evening time, if practices this it may lead to Garbha Vikriti i.e. fetal abnormalities (Bhava Prakash Pratham 5/261-262).

After taking light and conducive food in the evening, person should go to sleep with pleasant mind, after offering prayers to god in his own bed. (A.H. Su. 3/118).

After taking meals, one should clear his hands properly by removing food completely, clear the teeth by using tooth picks, if there is coating and bad odour gargle the mouth properly later walk for about hundred steps and sleep on left tottered position. After intake of more of liquid food sleep duration should be for less time.(A.H.Su. 10/13).

One should not sleep during sandya kala or evening time. Nidra is a prime among the factors responsible for sustenance of the body. Good sleep destroys half the diseases. One who gets should sleep at night, can digest the food well his kayagni is enhanced and there is proper nourishment of the body. These above all seems that physical life largely depends on psychic life as Ayurveda lays down this hypothesis. The developments of all the limbs of the body merely follow the mind. As charaka says, Sareera Sthana, 6-30.

Reading activities (academic involvements) is contraindicated during evening time. Reading during evening or night time (after sunset) is said to cause Ayu Hani i.e. loss of life. In modern day we have facility of artificial lightning in which reading and academic activities are done. In olden days it was not available. Reading in dark was supposed to strain the sense organs and damage the vital organs and their functioning which could lead to manifestation of many diseases leading to ayu hani.

Jyotsna, Avashyaya, Tama

Effect of Jyotsna (moonlight) Avashyaya (mist) and Tama (Darkness) on health:

Moonlight has a good and healing effect on one's body. Therefore, its good to get exposed to jyotsna or moonlight. It bestows the below mentioned benefits on regular exposure-

- Sheeta- cold and soothing effect
- Smarananda prada- Enhances desire
- Trishna Hrit- Pacifies thirst
- Pitta Hrit- Pacifies aggravated pitta and brings it to normalcy.
- Daha Hrit- Pacifies burning sensation

Mist at night time has below mentioned effect on body

- Heena gunaaha- Inferior in quality
- Vata kopa karaka- causes aggravation of vata
- Kapha kopa karaka- causes aggravation of kapha

Tama or darkness prevailing during the night time has the below mentioned effects on regular exposure-

- Bhayaavaham- creates fear
- Mohadi janakam- Creates delusion,confusion in recognition of directions
- Pitta Hrit- Alleviates pitta
- Kapha Hrit- Alleviates Kapha
- Kama Vardhanam- enhances desires
- Klama Krit- Causes tiredness

Roaming or strolling in darkness of night is contraindicated, but it has benefits also. Therefore the activities to be done at night should be wisely chosen.

Triphala for eye health

Triphala or 3 fruits or recipe prepared from triphala is best for maintaining eye health and also to cure the eye ailments. It can be consumed any part of the day, but it yields best results when taken during the night time. Powders of Haritaki(Terminalia chebula), Bhibhitaki (Terminalia bellirica) and Amalaki (Embilica officinalis) mixed together is called triphala. This churna should be mixed with in honey and ghee at night. When given in this form, churna is said to strengthen the eyes and vision.

Anjana- Collyrium

Collyrium cure eye diseases and also enhance eye health. It can also be applied at night time. Sauvirajan is the

best collyrium and shall be used daily. Rasamjana has cleansing properties. It should be used once in 5-7 days to expel the aggravated doshas from the eyes and also purifies the eyes.

Dhumapana

Medicated smoking or dhumapana can be practiced at night, after food. This alleviates vitiated Kapha.

DISCUSSION

In order to maintain health, a vast description of Daily Regimen (Dinacharya), Seasonal Regimen (Ritucharya), Code of conduct (Sadvritta) and Behavioural medicine (AcharRasayana) and Ratricharya (Night Regimen) are mentioned in Ayurveda. Lifestyle denotes the people live, reflecting the whole range of activities, attitudes of everyday from sunrise to sunset. These simple rules, especially Daily Regimen, if properly followed, helps in maintaining a good health.

CONCLUSION

Night is an important part of our life. Night meant for taking break from our activities a time for rest, to reactivate, rejuvenate and refresh ourselves and get ready for next day's activities. Ratricarya, a concept explained in Ayurveda explains the activities which need to be done and which need to be avoided during night time. In this article all ayurvedic treatises references have covered which explains the regimen of night in a comprehensive way.

REFERENCE

1. Charaka, Charaka Samhita 1/15, Priyavrata Sharma Editor, Vol- I, Fifth Edition, Chaukambha Orientalia Varanasi, 1998; 4.
2. Susruta, Susruta Samhita 15/41, Priyavrata Sharma Editor, Vol- I, Fifth Edition, Chaukambha Visvabharti Varanasi, 1999; 173.
3. www.wikipedia.com/muhurta/ratricarya.
4. www.wikipedia.com/swasthvritta/health.
5. Bhavmishra, Bhavaprakasha, Purvakhand 5/4-5, Commentary by Bulusu Sitaram, Vol- I, First Edition, Chaukambha Orientalia Varanasi, 2006; 67.
6. Bhavmishra, Bhavaprakasha, Purvakhand 5/261-262, Commentary by Bulusu Sitaram, Vol- I, First Edition, Chaukambha Orientalia Varanasi, 2006; 88.
7. Bhavmishra, Bhavaprakasha, Purvakhand 5/261, Commentary by Bulusu Sitaram, Vol- I, First Edition, Chaukambha Orientalia Varanasi, 2006; 87.
8. Bhavmishra, Bhavaprakasha, Purvakhand 5/266, Commentary by Bulusu Sitaram, Vol- I, First Edition, Chaukambha Orientalia Varanasi, 2006.
9. Bhavmishra, Bhavaprakasha, Purvakhand 5/298, Commentary by Bulusu Sitaram, Vol- I, First Edition, Chaukambha Orientalia Varanasi, 2006.
10. Agnivesha, Charak Samhita, Sutrasthana 5/15, Ayurved dipika commentary by Chakrapanidatta, Edited by Yadavji Trikamji, Chaukambha Surbharti Prakashan, Varanasi reprint, 2011.

11. Vriddha Vaghbata, Astangasamgraha Sutrasthan 10/20, Gupta A. editor, with Hindi Commentary, Varanasi: Chowkhamba Krishnadas Academy; Reprint, 2011.
12. Vriddha Vaghbata, Astangasamgraha Sutrasthan 3/118, Gupta A. editor, with Hindi Commentary, Varanasi: Chowkhamba Krishnadas Academy; Reprint, 2011.
13. C. Dwarakanath, *The Fundamental Principles of Ayurveda*, Krishnadas Academy, Varanasi, India, 1952.
14. Acharya YT, editor. Susrutha Samhita of Susrutha with Dalhana Tika. Varanasi: Chaukhamba Orientalia, 1992; 10.
15. Acharya YT, editor. Charaka Samhita. Varanasi: Chowkhamba Surbharati, 2000.

GARBHINIPARICHARYA A HOLISTIC APPROACH DURING ANTE NATAL CARE - ANARRATIVE REVIEW

*¹Dr. Vishala Turlapati and ²Dr. Jadhav Kalpana K.

¹M.D. Ayu.(Striog & Prasutitantra), Ph.D..(Balroga)HOD & Professor, Dept of Striog & Prasutitantra, ²M.D. Ayu.(Swasthavritta), Ph.D..(Swasthavritta) HOD & Associate Professor, Dept of Swasthavritta, ^{1,2}Yashwant Ayurvedic College, P.G.T. & R.C. Kodoli, Tal- Pnhala, Dist Kolhapur.

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ABSTRACT

Pregnancy is one of the most important event in the life of every woman and Ayurveda suggested a very good protocol for that which is called as Garbhiniparicharya. This divided into two parts i.e. Medicated diet and Exercise with Yoga & Meditation. Both are necessary in the development of foetus. In diet section all acharyas gave more importance on consumption of ghee, milk and meat. Acharyas gave monthly diet plans which are beneficial for foetal growth, maternal health and post delivery lactation including prevention of some diseases. Yoga & Meditation assist to promotion of both physical & mental health of mother & foetus.

KEYWORDS: Garbhiniparicharya, Pregnancy, Diet, Exercise, Yoga , Meditation.

INTRODUCTION

Ayurveda, describes “safe motherhood”. This great science compares conception to the germination and sprouting of a seed and its transformation in to a sapling and advises special attention to be paid to the nutrition and protection of the woman.

**“Dhruvam, chturnam, sannidhyat, garbhahasyad, vidhipur|
ruti, kshetrambu, beejanam, samagryadankuro, yadha”|| (su. Sa)**

Essential Factors For Conception

RUTU	FERTILE PERIOD
KSHETRA	A HEALTHY REPRODUCTIVE TRACT
AMBU	THE ESSENTIAL HORMONES
BEEJA	HEALTHY SPERM & OVUM

Basically Ayurveda is a science that goes on Thridosha Theory. Vitiation of thridoshas result in disease. Particularly in pregnancy and puerperal period, vata is the dosha which has to be given due consideration & it plays very important role during this period.

Pregnancy is one of the most important events in the life of every woman and Ayurveda suggested a very good protocol for that which is called GARBHINIPARICHARYA. Meaning of the word Paricharya is regimen and therefore GARBHINIPARICHARYA means the regimen which should be followed by pregnant women from conception up to delivery. GARBHINIPARICHARYA is mainly divided into two parts i.e. Aahar (Diet) & Vihar (Behavior). Both are essential in the development of foetus.

1. Diet protocol During Pregnancy (Garbhini Paricharya)

Aahar i.e. Diet is the most important component of Garbhini paricharya. Diet advised by Ayurvedic classics during pregnancy ultimately results in foetal growth, maternal health and post delivery lactation including prevention of some diseases.

More emphasis is given on the consumption of ghee, milk and meat by all acharyas.

“Ksheeram - Pushti , Dhrudatvam, Labhatecha, Garbho”

(ka. Sam)

Protocol For The First Trimester

“Ksheeramanupaskrutam, Matravat, Seetam, Kale, Kale, Pibeth”

(Charaka)

“Madhura, Seeta, Drava, Prayamahara, Mupasevet ”(SUS)

“Dviteeye, Mase, Ksheeramevacha, Madhuraoushadhasiddham”

(Charaka)

The above statements are indicating the importance of milk. Some of the authors also mentioned the use of honey and butter. During the second month it is advised by Charaka

and Vaghbhata to consume medicated milk with *madhura* drugs. (i.e. Carbohydrate rich substances)

During third month it is advised to consume milk with honey and ghee. Sushruta advises the intake of specially cooked rice cereal with milk.

Scientific Out Look

The advice to use milk constantly 9 months and particularly first 3 months indicates the emphasis laid on supplementing the essential nutrients, especially protein & calcium which is the very essential nutrients during this period & its intake should be increased. Ayurveda says milk is a *Purnnana* that is complete food because of its composition. Milk is a good source of protein, fat, vitamin A, B, D and also a calcium, prosperous & potassium. Milk is considered as the best *jeevaneeya dravya* as per Ayurveda i.e. which is essential for life.

Milk is having the property of antacid and mild laxative to combat the common ailments during first trimester like constipation and heart burn. During the first trimester of pregnancy the foetus is in a formative stage. During this stage the embryo is nourished by a process called *upasnehan* (percolation). Therefore as per Sushruta more liquid diet is advised. The milk medicated by drugs such as *satavari* (asparagus), and *vidari* (*pueraria tuberosa*) acts as sustainers of pregnancy (*prajasthapana*).

The use of butter and ghee is also justifiable as fats are essential for the absorption of vitamins A, D, E etc. Previous studies proved the consumption of pure ghee can check various diseases. (New Indian express 13 July 2004). Use of cold and liquid diet along with milk prevent dehydration during the first trimester as most of the woman experience nausea and vomiting hampering the intake. *Madhura* indicates the substances rich in glucose content which help to reduce vomiting. Sushruta even says that milk has got the property of preventing abortions.

Table

Fourth Month

Charaka advices milk with butter and Sushruta advices cooked rice with curd and rice with butter and meat.

“Ghrutam Smruthimati Medha Kanti Bala Karamayushyam Medhyam Vishahara”

(Sus)

Ghee increases the intellectual capacity of the child and also with its *Vishahar* (anti toxin) property helps in eliminating any form of toxins produced in the body. It even helps in controlling convulsions (*murchcha*) and prevents unconsciousness (*apasmara*).

The advice of meat from fourth month onwards stress the importance of development of *dhatus* (tissues) particularly muscular tissue which require more protein which is supplied by meat. Meat is also one of the best sources of folic acid, iron, iodine and essential amino acids.

Fifth Month

Along with butter, rice gruel and sweet rice enriched with ghee is advised.

Sixth month

“Shashte, Swadamshtra, Siddasya, Sarpisho, Matram, Payayed, Yavaguva”

(Sus)

Sushruta specially advised the intake of *ghruta* or rice gruel medicated with *gokshur* (*tribulus terrestris*)

The advice of *gokshuru* with ghee during sixth month is a unique protocol which can help in preventing PIH and related conditions like pre- eclamptic toxemia and their complications. This drug is a diuretic and considered as the best choice in the disorders of urinogenital system. Recent studies proved this drug has got Nephroprotective Activity (tried in albino rats).

Some of the cases with past History of PIH & PET responded well with this protocol with uneventful antenatal & post natal periods.

Probably this protocol helps in reducing the angiotensin sensitivity in susceptible subjects and produce vasodilator effect by interfering in the elimination of elevated concentration of extra cellular sodium. It needs a more scientific evaluation through sufficient clinical research.

Diet Protocol For Second Trimester

SUSHRUTA	<i>Sali dhanya with Ghruta, Dadhi & Mamsa Rasa</i> (Rice cereal with Ghee, curd and meat) and <i>gokshuradi Ghruta</i> (Ghee medicated with <i>Tribulus Terrestris</i>)
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CHARAKA	<i>Ksheera navaneetha Yukta, Saliodana with Ghruta (Milk with butter & Rice Cereal with Ghee)</i>
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Seventh Month

“*saptame, sarphi, prithak parnyadi, siddham / evamapayayate, garbhaha ||*

(SUS)

Sushruta advices medicated Ghee with *prithakparnyadi* drugs (uraria picta etc) These group of drugs are said to have the property of Foetal Nourishment. During eight & ninth months most of the *Acharya*'s advice in addition to the above diet protocol, administration of cleansing and Anabolic enema's with medicated drugs to promote a safe and easy labor by making the birth canal more flexible and brining foetus into right position.

During the last trimester plenty of intakes of different varieties of cereals are advised.

Diet Protocol For Third Trimester

SUSHRUTA	<i>Pruthak parnyadi Ghruta (Ghee medicated with uraria group of drugs)</i>
CHARAKA	<i>Sali dhanya yukta Ghruta & Ksheera (Plenty of cereals with Ghee & Milk)</i>
OTHERS	<i>Vividha dhanya's (Plenty of cereals of different varieties)</i>

Some of the important medicines used during antenatal period contain the fruits like Pomegranate (*Dadima*), Goose berry (*Amalaki*), Grapes (*Draksha*) etc., as main ingredients. These will help in preventing abortions and premature labour. Conditions like threatened abortion, Habitual abortions, can be effectively handled with theses preparations. Pomegranate is a uterine relaxant. Goose berry has got ante emetic ante diabetic property and growth promoting activity with plenty of vitamin C. It helps in the good absorption of Iron and if administered from the early antenatal period can prevent the Gestational diabetes. The Juice of goose berry and Honey improves Haemoglobin levels.

Important Pharmacological Preparations with Ghee And Fruits

POMEGRANATE (DADIMA)	<i>Dadimadi ghruta: - helps in sustaining the pregnancy, promotes nourishment to the foetus.</i>
GOOSE BERRY(AMALAKI)	<i>Amalaki Rasayana: - helps to increase the Haemoglobin levels, promotes good absorption of Iron, foetal growth, Prevents Gestational Diabetes.</i>
GRAPES (DRAKSHA)	<i>Drakshadi Rasayana: - Good foetal nourisher, prevents pregnancy loss.</i>

Benefits of Monthly Protocol

“Evamapyayate, Garbha,Anulomehi, Vayau, Sukham, Prasoojate, Nirupadravacha, Bhavati Evamupakarnta, Snigdha Balavati, Sukhamanupadrava, Prasoojate / (Sushruta Samhita)

The diet protocol helps in normal development of foetus with good nourishment, by regulating the myometrial co-ordination by preparing the birth canal helps for easy and uneventful labour and also helps in the expulsion of placenta.

APYAYATEGARBHA	Foetal Nourishment
ANULOMEHIVAYAU	Promotes the easy expulsion of Foetus
SUKHAMANUPADRAVA	Promotes easy and uncomplicated labour.
PRASOOJATE	

Vihar - Protocol During Pregnancy(Garbhini Paricharya)

Vihar or code of conduct during pregnancy which helps to promotion of foetal health both physical & mental as well as is beneficial to mother. It consists of Exercise, Yoga & Meditation as well as some rules of Behavior.

Exercise

Small exercise during pregnancy is helpful for promotion of antenatal as well as natal period. Walking is the best one.

For the First Trimester moderate walking start with about 10 to 15 minutes by alternate day. After that do it for five days of week by increasing time with 5 minutes. Maximum 10,000 steps per day should be done. For third trimester one should continue above schedule of walking. Keep walking for as long as one can, though she may avoid steep or uneven paths that could put off-balance. If there is any pelvic or back pain while walking during this trimester consult to physician.

Walking regulates blood pressure and helps to sleep better. Reduces the risk of complications during pregnancy and delivery. Boost up mood and energy levels. Relieves back pain and other aches. Helps to relieve constipation. Helps you burn calories so keep weight in check & also promotes postpartum weight loss.

Yoga & Meditation

As Yoga helps to develop the body and mind, it provides holistic health benefits for mothers.

As well as it gives physical and psychological support to mother during pregnancy, labour and post delivery period and subsides emotional variations. Yoga schedule during pregnancy should be practiced after consultation of doctor. And it is important to learn and practice yoga under the supervision of a trained Yoga teacher.

Protocol For The First Trimester

I)Asanas

For the first trimester of pregnancy, standing yoga poses are to be practiced. This gives strength to legs and improves circulation. It may help to reduce leg cramps.

Following Asanas are recommended in first trimester of pregnancy

trikonasan, konasan, marjariasana, badhakonasana, veerbhadrasan, shavasana

1.Trikonasana (Triangle Pose)

As in pregnancy there is shifting of center of gravity it is very helpful. And also reduces back pain and stress as well as maintains physical and mental balance. Due to practicing this asana stretching of the hips takes place which helps during delivery.

2.Konasana-I (Standing Sideways Bending One Arm)

It maintains flexibility of the spine. Gives exercise to the sides of the body and stretching of it. Also helps to recover constipation which is a common symptom of pregnancy.

3.Konasana-II (Standing Sideways Using Both Arms)

In this asana stretching of arms, legs, spine as well as abdominal organs takes place which further results to improve tone and strength of these organs.

4.Marjarasana (Cat Stretch)

It stretches the neck and shoulder and relieves the stiffness. Also gives strength to shoulders and wrists. Practicing Marjarasana keeps the spine flexible. This is useful because the back has to support more weight as the pregnancy advances. It also tones the abdominal region and helps the body to deal with weight gain during pregnancy. By improving blood circulation, it helps in good nourishment of the reproductive organs.

Marjarasana should be performed only in the first six months and not beyond that.

4.Veerbhadrásana (Warrior Pose)

It improves balance in the body. It tones and strengthens the arms, legs and lower back and boosts stamina.

5.Badhakonasana (Butterfly Pose)

Performing this asana stretching of thighs and knees takes place also it relieves pain. This asana improves flexibility in the hip and groin region.

It recovers fatigue. It helps to make possible smooth delivery when practiced until late pregnancy.

6.Shavasana (Corpse Pose)

Shavasana should be practiced at the end of a yoga session to relax mind and body. Stay in this position for 10 -12 minutes and you will feel refreshed. Shavasana helps to relax mind and body and repairs cells. As anxiety and stress are a common problem in pregnancy, this asana can help you tackle it easily by relieving stress.

Precautions to be taken for pregnant women during yoga practice

Do Asanas without excessive effort. Avoid doing Asanas in inversion poses.

Avoid practicing yoga during the 10th to the 14th week of pregnancy since these are crucial times.

Avoid Asanas that put pressure on the abdomen during advanced stages of pregnancy.

Yogasanas (Yoga poses) to avoid during pregnancy

Naukasana (Boat Pose), Chakrasana (Wheel Pose), Ardha Matsyendrasana (Sitting Half Spinal Twist), Bhujangasana (Cobra Pose), Viparita Shalabhasana (Superman Pose), Halasana (Plow Pose), Sarvangasana or Viparit karani, Shirshasana (Head down pose), Setu Bandha Sarvangasana (Bridge Pose), Suryanamaskara (Sun Salutations)

II) Pranayama

Pranayama or breathing exercises during pregnancy. Pranayama eliminates negative emotions like frustration, anger, fear. It also helps to release stress, accordingly keeping the mind calm and quiet. Pregnant women should perform simple practices of pranayama and these are Anulom Vilom pranayam & Bhramari pranayama.

Anulom – vilom Pranayama (Alternate Nostril Breathing technique)

It maintains body temperature. It results to improve calmness and relaxes the mind. Major benefit of Anulom Vilom pranayam is it enhances oxygen supply to mother which helps by means of the baby's growth.

Bhramari Pranayama (Bee Breath)

It helps by regulating blood pressure and also relieves headaches.

Bhramari Pranayam is more effective exercise for brain due its humming sound, vibration is produced which affects directly to the hypothalamus of brain causing a resonance in mind and it fills the whole body with calmness and happiness. Bhramari Pranayama have a preventive effects on stress, anxiety, depression. Bhramari Pranayama induces the positive thoughts and feelings of happiness.

Meditation

After the session of yoga asanas and pranayamas pregnant women should practice the some meditation. This includes Omkar mantra chanting and Yoganidra.

Omkar mantra chanting

Omkar mantra chanting reduces the stress and keep mind relaxed. Also helps to reduce hypertension. It improves steadiness and peace in both mind & body. It is helpful in mood swings during pregnancy.

Yoga Nidra (Yogic sleep)

Yoganidra practice deeply relaxes every cell in the body. Also it reduces tension and anxiety. Yoganidra helps to regulate the blood pressure.

Protocol for the second & third trimester

During the second and third trimester, time of holding asanas should be reduced to prevent fatigue. Substitute with breathing exercises like *deergha shvasana* as well as above protocol mentioned under meditation for first trimester.

CONCLUSION

Due to pregnancy and child birth still the death rate is very high in India (100,000 / Year). Most of the rural woman cannot afford to take effective ante-natal & post natal care due to so many socio- economic reasons which is resulting in high mortality rate.

The Ancient Medical science Ayurveda is very well aware of the complications that occur during Ante-natal & post natal period. This is the reason a great emphasis is laid on the *Garbhini paricharya* (ANC) with a varied range of dietetic protocol which is quiet acceptable for so many rural woman also because it is very near to the cultural practices of India, particularly rural community.

Most of the conditions that trouble the woman during pregnancy can be effectively tackled through a protocol combined diet with drugs, which will be easily acceptable by women who are sensitive to take Medicines. As it is combined with diet, additional attention need not be given for medicine intake.

All the drugs (herbs) that are included in the protocol are safe and effective. There is no need of any additional supplements of this protocol is followed. The drug like *Tribulus terrestris* (*Gokshura*) effect in preventing toxemia's of pregnancy need to be evaluated as it can be breakthrough in the management of PIH & PET. Effective involution in the post natal period can be achieved.

Practicing Exercise & Yoga during pregnancy keeps the body flexible and mind happy. In addition it has a positive effect in common symptoms such as morning sickness, painful leg cramps, swollen ankles and constipation. As well as it helps to proceed easy & smooth labor and delivery through relieving tension around the cervix by opening up the pelvic region. This prepares to mother for labor and delivery and also makes faster recovery in postpartum period.

Finally this protocol keeps the mother and the child healthy which is ultimate aim of any science.

REFERENCES

1. Charak Samhita, Poorvardh, Varanasi, Chaukhamba, Bharti Academy, Reprint 2002.
2. Charak Samhita, Uttarardha, Varanasi, Chaukhamba, Bharti Academy, reprint 2002.
3. Bhavprakash, Bhavprakash Hindi by Khemraj Shastri Krishnadas, Pratham Khand.
4. Sushrut Sanhita, Poorvardh Varanasi ,Chaukhambha Sanskrit Sansthan, Reprint 2008.
5. Prof. Premvati Tiwari, Hindi, Ayurved Prasuti Tantra avam Stri Rog, Varanasi, Chaukhambha Orientalia, Reprint 2003.
6. D. C. Dutta, Textbook of Gynaecology, Kolkata ,New Central Book Agency(P) Limited, 5th edition, 2008.

7. B.K.S. Iyengar ,Patanjali Yogsutra , Marathi ,translation by Dr Sameer Kulkarni, Patanjali Yog Sutra Rohan Publication, Riprint 2015.
8. Patanjali Yoga Sutra, Sanskrit text with translation and commentary by Swami Vivekananda
9. Sampurn Swasthavritt Vigyan Marathi by Dr Vijay Patrika ,Shri Dhanwantri Publication 8th edition 2019.
10. Yoga Tatva Upanishad, translated by Narayan Swami Aiyar
11. Yogatattvopnished online book, www.swargarohan.org.
12. Yogshikoupanishad, online book www.swargarohan.org.
13. Sampurn SwasthavrittVigyan Marathi by Dr Vijay Patrika ,Shri Dhanwantri Publication8th edition 2019.
14. Yoga in Pregnancy M. Kannan* , P Sathiya Rajeswaran, S Natarajan, R Vasudevan, S D Muralidass, M S Shree Devi, Malaya Journal of Biosciences, 2015; 2(2): 104-109 ISSN 2348 6236 print / 2348 3075 online.

Review Article

Role of Yoga in Sportsman

Kalpana Jadhav^{1*}, Milind Godbole², Archana Ingole-Patil³

Professor and HOD¹, Dean and Professor², P. G. Scholar³

^{1,2,3}Department of Swasthwrutta

¹Yashwant Ayurvedic College, P.G.T & R.C, Kodoli, Tal-Panhala, Dist. Kolhapur, Maharashtra India- 416114

* Corresponding Author: Dr. Archana Ingole-Patil, E-mail: archuabhiagtap@gmail.com

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ABSTRACT:

Sports medicine is a medical specialty that mainly deals with the physical fitness & prevention of injuries related to sports & exercises. Due to concussions & repetitive motion there is risk of musculoskeletal strain or trauma. A sport is a cultural phenomenon. The benefit to health & quality of life from participation in physical activity at all levels is clearly apparent. Despite all the physical advantages, participating in a sport also works wonders to your brain & overall personality. It is necessary for the player to have few qualities which are an essential part of his success. They include flexibility; agility, concentration, speed, balance, strength and stamina. *Yogasana* help us to bring up these qualities in use in games.

Material & methods-

Extensive literature review done using ancient yogic texts such as *Gherand samhita*, *Hathyog pradipika* & *Patanjali yogsutra*. Internet databases such as Pubmed, Scopus, Cochrane, Google scholar, DHARA etc

Discussion-

Prevention is an area of increasingly specialized interest knowledge & expertise. Sports medicine will make its significant contribution in the area of prevention which necessitates adoption of yogic postures & breathing techniques. Sports medicine & *yoga* both serve to benefit active people & professionals within two distinct perspectives, one pushes the limit, and the other protects health within these limits. The present paper intends in the above context to identify the possible contribution of *Yoga* in the field of sports. Obviously there is hardly any direct reference in the ancient yogic texts. But some *Asanas*, *Pranayam* are prescribed for active individuals routinely

Conclusion-

Yoga offers many benefits for sportsman. It can improve sportsman's performance. *Yoga* is a key for improving balance & helps avoid injuries with increased flexibility & sharpen your focus through mindfulness. *Yoga* can help them to get your body & mind into the game. It builds strength to improve your overall performance. *Yoga* play vital role in life of athlete. *Yoga* works on strength, flexibility, balance, agility, endurance, core & overall strength general also helps to prevent injury.

KEY WORDS: Sinus track, Traumatic Abscess, Suppuration, Pustules, Probing, Scraping.

INTRODUCTION:

Relevance of sports Medicine:

Sports medicine is a medical specialty that mainly deals with the physical fitness & prevention of injuries related to sports & exercises¹. Due to concussions & repetitive motion there is risk of musculoskeletal

strain or trauma in sports². A sport is a cultural phenomenon. The benefit to health & quality of life from participation in physical activity at all levels is clearly apparent.

Physical fitness plays important role in sport person's life. For that daily physical exercises are done by them. Sportsman requires physical exercises, which result in better blood circulation & overall improve his physical stamina. It opens up ones nerves & makes the body more flexible, agile & responsive. Despite all the physical advantages, participating in a sport also works wonders to your brain & overall personality. A sport is a competition where you compare yourself with opponents. You need to judge their moves & make instant decisions, consequently improving your mental ability. Thinking quickly & responding accordingly has positive impact on a sportsman's brain. Sports also develop you social skills as you interact with your opponents as well as the teammates. It improves one's ability to work in a team.

Relevance of yoga:

Yoga is the science of life & the art of living. It is India's oldest scientific, perfect spiritual discipline. It brings about deep change of attitude. Yoga is a great low impact exercise with combinations of poses & breathing exercises. A 8-week RCT conducted on sedentary healthy adults concludes that to improve functional fitness, regular Yoga practice is just as effective as stretching-strengthening exercises with minimal equipment³.

Ashtang yoga⁴:

According to sage Patanjali Ashtang yoga means *Yam, Niyam, Asana, Pranayam, Pratyahar, Dharana, and Dhyana & Samadhi*.

Eight stages of Patanjali yoga are -

1. *Yama*- The universal moral laws.
2. *Niyam*- personal moral roots of conduct. Niyam of Ashtang yoga is concerned about mental health.
3. *Asana*- yogic postures.
4. *Pranayam*- acquiring & controlling prana or energy, by means of the breath.
5. *Pratyahar*- The withdrawal of the senses from the outer environment.
6. *Dharana*- concentration
7. *Dhyana*- meditation
8. *Samadhi*- Enlightenment

It is explained for the maintenance of personal, social, mental & spiritual health of human being. By practicing Ashtang yoga we can prevent & promote our health. So sportsman should try this to maintain his personal, social & mental health.

Relevance of Asana in Sportsman

Sports make the environment around us full of excitement and cheerfulness. We see players in full spirit and confidence and nevertheless audience which keep inspiring the players whereas; yoga teaches us to concentrate and creates a peaceful surrounding. Can these contrast things ever be linked to each other? If yes, then till what extent can we relate yoga with sports? If we systematically study yoga then surely the answer is yes. It is necessary for the player to have few qualities which are an essential part of his success. They include flexibility, agility, concentration, speed, balance, strength and stamina⁵. Regular practice of asana can increase core stability which is important for injury prevention and sports performance. Few of these are found innate in the player and some can be achieved by regular practice. Yogasana help us to bring up these qualities in use in games. Doing Asanas with deep conscious breathing increases oxygen supply to the cells and stretching and contraction of different muscle groups builds stamina and strength of the sportsperson⁶. A particular sport requires only certain muscle group to develop. Yoga helps in this by allowing a full range of motion of the tendons, ligaments and muscles of the body. This cultivates balance and increases their strength which is beneficial for them⁷. Nowadays we see people spending money on consulting a dietician to maintain their body and strength. Also they spend a lot of money in gyms. In short maintaining our body has become too costly. But yogasana are cost recessive and healthy and guaranteed which substitute gyms and dieticians without any doubt.

To develop the above mentioned physical qualities, few yoga asana are recommended:

Flexibility:

For any game and player especially for outdoor games flexibility is of significant importance. Muscles make us flexible, few of which are involuntary. The muscles of limbs and forelimbs are very stiff and strong which reduce the flexibility in them. For reducing their stiffness following asana can be performed:

TRIKONASAN, PARSHWAKONASAN, ARDHACHANDRASAN, VEERBHADRASAN, MARICHASAN, ARDHAMATYASAN AND BADHKONASAN.

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Relevance of Asana in Sportsman

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Speed:

Flexible muscles make the movements of the player easy and fast. In outdoor games like football, running, etc. it is important for the player to increase their speed. Every sport needs considerable amount of time and energy to acquire speed in that sport. If the sportsperson does not have enough velocity then the performance would have no grace⁸. For that following Asanas are recommended:

ADHOMUKHSHWANSAN, UTHITHTRIKONASAN, ARDHACHANDRASAN, VEERBHADRASAN AND BADHKONASAN

Agility:

Agility means to increase speed and move faster and easily. For that players need synchronized co-ordination between hands, eyes and brain. For that players have to perform some asana one after another quickly. A 6-week Yogasana training program conducted on engineering students shows significant improvement in agility⁹. These include asana right from TADASAN then NAMASKARASAN → URDHWAHASTASAN → UTTANASAN → ADHOMUKHSHWANASAN → URDHWAMUKHSHWANASAN → CHATURANGDANDASAN → U R D H W A M U K H S H W A N A - SAN → ADHOMUKHSHWANASAN → UTTANASAN → URDHWAHASTASAN → TADASAN

Concentration:

For concentration 'Tratak' is important for all sports, especially Jyoti tratak.

Balance:

It is the ability to stay upright or stay in control of body movement. For example gymnastics.

Following asana help us in doing so:

For eyes and hands and legs coordination: Uttanasan, Urdhwahastasan

Eyes and Vertebral Column:-Bhardwajasan, Marichasan

Stabilities of extremities: Tadasan, Utthit-trikonasan, Ardhchandarsan, Veerbhadrasan, Dandasan

Strength:

Outdoor games require a lot of strength in muscles. Routine and consistent practice of the various

yogasana has helped to build strength and improve lean muscle mass. They are:

Dhanurasan, Veerbhadasan, Ardhachandrasan.

Stamina:

Long lasting games such as cricket, football, etc. stamina of player is of utmost importance as our performance depends on it. For increasing the stamina of player, following Asanas are performed:

Adhomukhshwanasan, Ardha Halasana, Paschimottanasan, Uttanasan.

Stretching and Relaxation:

After every game the body is under tremendous stress. To reduce this stress various asana are given by which the body is back to normal. These are:

Sheershasan, Uttanasana and Suptveerasan

YOGASANA- A THERAPEUTIC ROLE IN SPORTSMAN

Once the day at sports ground is over, Asana aids the recovery of tired muscles & joints of sportsman. It rejuvenates a sportsman to be ready for next day's game.

Back /Neck pain:

Backward bending poses like *Ushtrasana*, *Bhujangasana*; *Shalabhasana* reduces back pain by stretching & strengthening the muscles. It gives a good stretch to the back muscles & helps in correcting the posture.

Sleep related problems:

Sleep is another body pattern to be affected due to hectic practice schedule & travel. Lack of sleep or prolonged periods of wakefulness make body & mind irritable & sluggish. Tranquillizers or anxiolytic drugs are often prescribed but natural sleep is more important than drug induced sleep. According to B K S Ayangar; Setubandha, *Sarvangasana*, *Vipritkarni* & *Shavasana* are useful in this situation. This calms mind & induces good sleep.¹⁰

Relaxation after game:

After the game, it is important that we relax our body and muscles. It is so because we must keep our body relaxes so that it should not hinder our next movements. For this shavasana is useful.

Frequent travelling:

Travelling is a constant part of sportsman's professional life. Due to prolonged travelling and lack of mobility, joint pain, back pain, etc. are the problems they frequently face. After the long journey, knee joint is mostly affected due to restricted mobility. The asana which works especially on the knees to improve circulation in that joint are *Baddhakonasana*, *Upvishtakonasana*, *Suptapadangushtasana*.

YOGASANA - A way to prevent Sports Injuries

Yogasana has a greater prophylactic role than a therapeutic role. The role of Asana of correcting the individual on all level is great. It gives proper muscle tone, balanced postures & gives massage to the deeper muscles.

STHIRAM SUKHAM ASANAM | Patanjalyogdarshan 2|46

Asana is that which contribute to stability & comfort. Asana are expected to counteract the instability. Asana brings steadiness. . Here stability means not only for body but also for mind as only stability of body & mind together would lead us to the sense of wellbeing.

By practicing them one develops agility, balance, endurance & great vitality.

Yoga for prevention of osteoarthritis:

Osteoarthritis is a degenerative condition. This condition can occur in any joint and is common in knees, hips, lower back, neck, hands and big toes according to specific sport. Osteoarthritis is more common in sportsman in their later life due to injuries during sports.

So with proper Asana osteoarthritis can be nearly cured & a good control can be achieved to lead a fruitful retirement life.

YOGA AND PRANAYAM IN MENTAL HEALTH:

Every sportsman wants to enjoy happy & balanced life. Nowadays, every sportsman is under some kind of stress. This stress can be mental, financial or emotional. In general every sportsman set their goals like name, fame, good lifestyle & money. But how many really succeed in it? In this era of rat race, they put extra pressure on their mind & body which results in stress. In this situation they need to plan

their daily schedule in such a way that they give justice to profession & health. Balancing poses (Asana) in corporation of medication & breathing can help improve a person's mental well being & calmness. Other benefits are increasing body's awareness, relieve chronic stress patterns, relax the mind, centers attention & sharpens concentration. For prevention & promotion of mental health yoga has given various procedures to practice daily. They are ***Anulom- vilom Pranayam, dhyana & omkar chanting***. These procedures decrease Raj & Tam doshas of mana & increase Satva Guna in body which results into improvement in daily work, increase in concentration, improves relationships with other people etc. At the end of the day before going to sleep, spend 15 to 30 min for meditation. Due to this we get connected with our soul & increase inner strength. In yoga ***Yam, Niyam, Dharana & Dhyana*** are explained for maintenance of mental & spiritual health. Therefore, to enjoy happy & balanced life one should do **Asana, Pranayam & Dhyana** regularly & do not forget to celebrate success. To achieve physical and mental health, yoga uses the body as a tool to develop the attitudes which help in doing so.¹¹

CONCLUSION:

Yoga offers many benefits for sportsman. It can improve sportsman's performance. Yoga is a key for improving balance & helps avoid injuries with increased flexibility & sharpen your focus through mindfulness. Yoga can help them to get your body & mind into the game. It builds strength to improve your overall performance. Yoga play vital role in life of athlete. Yoga works on strength, flexibility, balance, agility, endurance, core & overall strength in general also helps to prevent injury. Thus *self discipline* is maintained through *Yama*, *positive attitude* towards community is maintained through *Niyam*, *physical fitness* through *Asana*, *positive vitality* through *Pranayam*, *training and controlling the sensory system* through *Pratyahar*, *mental fitness, peace & self awareness* through *Dharana, Dhyana & Samadhi*.

Yoga is dedicated in restoring & maintaining 'Health' by harmonizing the physical, mental, emotional & spiritual elements. After all good health is a crucial element of a happy, fulfilling life of sportsman. We aim to develop holistic model with integration of yoga to all existing treating methodologies with an intention to reduce prevalence of sports injury.

To ensure the best recovery plan for the individual for prevention of musculoskeletal injuries, strain yoga

plays a vital role. It helps to make the better performance & ensuring their safety while performing the activity. It can help them to get your body & mind into the game.

REFERENCES:

1. https://en.m.wikipedia.org/wiki/Sports_medicine
2. JN Wilson (1982) Watson and Jones' textbook on Fractures and joint injuries, edited by J.N.Wilson. (6th edn), Volume 1, 9th chapter, Jama publication, India, pp.986.
3. Neha P. Gothe1 and Edward McAuley2, Yoga Is as Good as Stretching-Strengthening Exercises in Improving Functional Fitness Outcomes: Results From a Randomized Controlled Trial : J Gerontol A Biol Sci Med Sci, 2016, Vol. 71, No. 3, 406-411 doi:10.1093/gerona/glv127
4. Dr. Mangalagowri V. Rao, The Essence of Yoga, Edition 1, Choukhamba Orientelia, Varanasi, 2011, Pg no. 81-149
5. Tatiana V. Ryba, The Benefits of Yoga for Athletes: The Body March 2006 Athletic Therapy Today 11(2):32-34
6. Shashidhara, Effect of yoga on sports performance, International Journal of Yoga, Physiotherapy and Physical Education, Volume 3; Issue 1; January 2018
7. Luxmi Sharma, Benefits of Yoga in Sports -A Study, IJPESH 2015; 1(3): 30-32
8. Sunil Gill, Amreek Gill, Need of Yoga on sports performance, International Journal of Multidisciplinary Research and Development 2014; 1(7): 74-77
9. Bal, B.S.; Kaur, P.J. (2009). Effects of selected asanas in hatha yoga on agility and flexibility level. Journal of Sport and Health Research. 1 (2):75-87.
10. BKS Iyengar, Yoga For Sports, 1st Edition, Westland Ltd, New Delhi, 2015
11. Poonam, Benefits of Yoga in Physical education and sports, International Journal of Educational Planning & Administration. ISSN 2249-3093 Volume 7, Number 1 (2017), pp. 31-39
12. K. Park, Textbook of Preventive and Social Medicine, Bhanot Publication, 23rd Edition
13. Vaidya Sarwesh Kumar Agrawal, Hathyog pradipika, 1st edition ,Choukhamba Orientelia, Varanasi,2013
14. Dr. Ramashankar Tripathi, PatanjaliYogdarshan, 4th Edition, Choukhamba Academy Varanashi, 2014

15. V.G. Devkule, GherandSanhita, Sharda Sahitya, Pune,2005
16. Acharya Rajkumar Jain, Yog Aur Ayurveda, 4th Edition, Chaumkhambha Orientalia Delhi, 2011
17. www.yoga journal.com

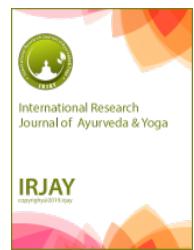
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A review on Effect of Lifestyle Changes and Yoga in the Prevention of *Madhumeha*

Dr. Milind Godbole¹ Dr. Kalpana Jadhav² Dr. Shubhangi Kodag³

1 - Dean & Professor Yeshwant Ayurved College PGT & RC, Kodoli, Kolhapur, Maharashtra.

2 - HOD & Associate Professor, Department of Swasthavritta, Yeshwant Ayurved College PGT & RC, Kodoli, Kolhapur, Maharashtra.

3-PG Scholar, Department of Swasthavritta, Yeshwant Ayurved College PGT & RC, Kodoli, Kolhapur, Maharashtra.

ABSTRACT:

Ayurveda describes the importance of preventive aspects of health rather than curative. For this Ayurveda describes the concept of *Dincharya*, *Ritucharya*, and *Sadvritta* as well as established guidelines for healthy lifestyle. Diabetes is lifestyle disorder that can be managed by medical treatment. Lifestyle intervention and yoga may play a significant role in management of weight, controlling blood glucose level. As yoga including *asanas* and *pranayam* provide an ideal care for prevention and management of *Madhumeha*.

Keywords: Diabetes, Yoga, Lifestyle, *Asanas*, *Pranayam*.

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Corresponding Author : Dr. Shubhangi Kodag,PG Scholar,Department of Swasthavritta,Yeshwant Ayurved College & RCT,Kodoli, Kolhapur, Maharashtra.
Email,id:drshubhangi1990@gmail.com

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INTRODUCTION:

Ayurveda is a holistic science of life¹. The main aim of Ayurveda is to maintain health of the healthy person and to cure the illness of diseased person². The basic concept of Ayurveda about the healthy person is to maintain the equilibrium of *Sharirika* and *MansikaDosha*.

Madhumeha is described in ancient Ayurveda text like *Charaka Samhita*, *Sushruta Samhita*, *ashtang hrudayetc*. Ayurveda referred *Madhumeha* as *Ashtamahagad vyadhi*³. *Prameha* is a *tridoshaj kapha* predominant disease⁴. It can be correlated with diabetes mellitus type 2.

The main causes are taking heavy caloric food with lack of exercise, eating frequently and in excess quantity, *snigdha* and guru

gunatmak food like fish, cured, new rice and sweet items, butter, ghee, milk etc. increases *kapha*, *meda* and urine which are the main etiological factors⁵.

Its main feature according to Acharya *Vagbhat* is *prabhuta* and *avil mutrata* i.e. increased quantity and turbidity of urine and this all causes due to vitiated *kapha dosha*⁷

So it is the need of time to review the ancient systems of medicine in order to apply measure prevalent in these systems in preventing the coming epidemic of lifestyle disorders which are preventable with changes in lifestyle, and environment.

AIMS AND OBJECTIVES

To assess the effect of *Yoga* and lifestyle guidelines for prevention of *Madhumeha*.

MATERIAL AND METHODS

Lifestyle intervention and *Yoga* schedule was prepared on the basis of *Ayurvedic* principles. Material is collected from *Charak samhita*, *sushruta samhita* and from other Publications.

ETIOLOGY

-*Asayasukham* and *Swapana-sukham* as described in *Charak chititsa*.

-*Deevaswapan*, *Avayayam* and *Aalsya* as described in *Sushruta nidaan satha*.

SIGN AND SYMPTOMS

1. *Prabhuta Mutrata*(Polyuria)
2. *Trishnaadhikyata*(Polydipsia)
3. *ksudhaadhikya*(Polyphagia)
4. *Daurbalya*(Weakness)
5. *Avil Mutrata*(Turbidity in urine)
6. *Kara-pada daha suptata*(Numbness)

CLASSIFICATION

1. Classification according to causes of diabetes

- a) *Sahaja Prameha*
- b) *Apathyannimitaja Prameha*

2. Classification as per body type

- a) *Sthoola*
- b) *Krusha*

3. Classification as per Dosha Predominance

- a) *Kaphaja Prameha* (10 types)
- b) *Pittaja Prameha* (6 types)
- c) *Vataja Prameha* (4 types)

4. Classification of Diabetes mellitus

- a) Type 1 Diabetes
- b) Type 2 Diabetes

SOME IMPORTANT LIFESTYLE MODIFICATION POINTS:

1. *Brahama Muhurta Jagrana*- Get-up early in morning.
2. *Chakramana*- Brisk Walking.
3. *Abyanga*- Light Massage.
4. *Asana and Pranayam*.
5. After lunch walking for 15 minutes.
6. After dinner slow walking for 15 minutes.
7. Sleep only 6-7 Hours during night time.
8. Avoid sleep in day time.
9. Avoid excess intake of sweet, meat, chocolate, milk products.
10. Avoid cold drinks, alcohol substance.

YOGA

Yoga provides an appropriate lifestyle intervention that would be greatly helpful in regeneration of beta cells of pancreas may be taking place, which may increase utilization and metabolism of glucose in peripheral tissues, liver and adipose tissue through enzymatic processes. Various type of Yoga Asana performed as preventive therapies are⁹,

1. *Suryanamaskar* (increase blood supply and improving insulin administration),
2. *Mandukasan* (stimulate pancreas to secrete insulin),
3. *Dhanurasana* (improves functioning of pancreas and intestines),
4. *Sarvangaasana* (improves blood circulation),
5. *Halasana* (stimulates pancreas and activate immune system).
6. *Pranaym* – it reduces the over activity of central and autonomic nervous system
7. *Kapalbhati* - This is a very effective form of Pranayama. In this stimulation of vagus nerve by contraction of abdominal muscles has a beneficial effect in the

reduction of depression and normal insulin secretion from pancreas.

8. *Anulom vilom* - It is also known as alternate nasal breathing. It has the calming effect on the nervous system, which reduces stress level, helping in diabetes.
9. *Bhastrika*
10. *Ujjayi Pranayam*--are the best options for diabetic because it is believed that these *pranayam* practices reduces stress hormone like adrenaline and cortisol which in turn lowers blood glucose level

DISCUSSION

Avoiding of etiological factors (*Nidan Parivarjana*) through change in Life style And by practice of Yoga we can prevent and manage the *Madhumeha*. *Yoga asanas* are ideally suited for both types of *Prameha*. In insulin Dependent diabetes Mellitus, *asanas* help to prevent and increase in insulin required over the years. In NIDDM, *asanas* help to normalize blood sugar due to the high intensity workout. Yogic exercises can either be of high or low intensity, depending on the clinical condition. Yoga is microcellular in its action. When the internal organs massaged,

sensitivity to insulin and sugar uptake by muscles is enhanced. *Asanas* also pressurize the pancreas in an effort to improve the secretory status. The massage of pancreas by forward bending and twisting helps to release more insulin with respect to food intake. Backward bending being very strenuous, help to reduce blood glucose. It improves blood supply to all abdominal and pelvic organs. Forward bending increases the gastric fire and help healthy digestion of food. This prevents fluctuations of glucose levels in diabetic patient. The excess sugar burned immediately by stimulation of gastric fire. Therefore yoga therapy is also very useful for all complications of Prameha (Diabetes Mellitus).

CONCLUSION

Ayurvedic guidelines of lifestyle for adopting a healthy dietary pattern along with physical activity those are valuable tools in the prevention of D.M. Though yoga and lifestyle intervention may counter the complex pathology of NIDDM and it

only ensures good glycemic control but also help in delay of diabetic complications. Yoga therapy stimulates auto healing systems of body to increase the insulin sensitivity and also removes the complications of the *prameha*. It is metabolic disease in which primary problem is the defective utilization of sugar by the body. The sufficient insulin is produced by pancreas with the massage by yoga *asanas* which controls the body's ability to store and utilize sugar. Pranayama definitely increases the natural immunity of body and vital capacity of lungs which also removes stress while improving oxygen perfusion to tissues. Therefore specific yoga asanas and pranayama should be done daily. Yoga life style is very useful for all complication of prameha. The aerobic exercises like swimming, cycling, running, rowing, jumping rope should also performed to control the endocrine hormone secretions like insulin which controls diabetes mellitus.

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REFERENCES

1. Vaidya YG Joshi. Charak Samhita, vaidyamitra prakashan, sutrasthan (2009): 16.
2. Vaidya YG Joshi. Charak Samhita, Vaidyamitra Prakashan, Sutrasthan (2009): 412.
3. Acharya priyavat sharma, charak Samhita, edition reprint, publisher chaukhamba Sanskrit prakashan, Delhi, indriyasthan chapter 9th 1 (2009): 848.
4. Shastri kashinath and chaturvedi gorakshnath, charak Samhita Varanasi, chaukhamba bharati academy 1 (2001): 633.
5. Vaidya YG Joshi Charak Samhita, Vaidyamitra Prakashan, chikitsa sthan 2 (2014): 177.
6. Ganesh Krishna Garde, Sarth Vagbhat, vagbhatakruta Ashtang hrudayam, Nidansthan, chaukhamba surbharati prakashan, Varanasi (2011): 191.
7. Vidyotini hindi commentary by Pt. Kashinatha Sastri, Dr. gorakhnath Chaturvedi Charaka Chikitsa vol 2, chaukambha orientalia, Varanasi, reprint year, 2012; pg no 227.
8. Kaviraj Ambikadutt Shashtri, Sushruta samhita vol 1, chaukambha Sanskrit sansthana, Varanasi, reprint edition 2012; pg no.- 326.
9. Agarwal Vivek et.al, A review on role of Exercise and Yoga in the prevention of Madhumeha, IJAAR, JAN- FEB 2017; 2(11).



ROLE OF BHRAMARI PRANAYAMA IN PREVENTION AND PROMOTION OF MENTAL HEALTH - A REVIEW

Pranita K Shinde¹, Kalpana Jadhao², Pradnya Shinde³, Milind M Godbole⁴

¹Assistant Professor, Swasthavritta Department, Vidarbha Ayurved College, Amravati, Maharashtra, India

²Associate Professor, Swasthavritta Department, Yashwant Ayurved College, Kodoli, Kolhapur, Maharashtra, India

³Associate Professor & HOD, Kriyasharir Department, Vidarbha Ayurved College, Amravati, Maharashtra, India

⁴Professor and Principal, Yashwant Ayurved College, Kodoli, Kolhapur, Maharashtra, India

Email: dr.pranita27@gmail.com

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ABSTRACT

Background -In today's era lifestyle of people has become very mechanical. Everyone is running in a rat race for target achievement, which results in stress. This stress further effects on physical as well as mental health of an individual. Mental health is the balanced development of emotional attitudes and personality which live harmoniously with all society or community. Mental disorders are characterized by alternation in thinking, mood or behaviour associate with impaired functioning. Mental and behavioural disorders are found in all age groups, and the prevalence rate is about 10%. To overcome these problems, everyone should concentrate on prevention and promotion of health. For physical health healthy diet, daily regimen, seasonal regimen & exercise etc. are the preventive major, and for prevention of mental health *Sadvrittapan*, application of *Acharrasayana*, *yoga* & meditation practises are essential. *Yoga* consists of eight processes, in this *Pranayam* is very important to achieve control on *Indriyas* that is sense organs. *Bhramari Pranayam* is one of significant type of *Ashtakumbhaka* & very easy to practice. Vibrations produced due to humming sound of *Bhramari Pranayam* affects directly on the hypothalamus of the brain, causing a resonance in mind which relieves stress and produces calmness and happiness in the whole body. This article deals with the role of *Bhramari Pranayama* in prevention and promotion of mental health to provide a better solution. **Aim** - To study the role of *Bhramari Pranayama* in prevention and promotion of mental health.

Setting & Design – Literary study. **Material & Methods** - The present investigation is based on primary & secondary sources of data mainly collected from literature studies of various *Ayurvedic Samhitas* & texts as well as numerous published research articles. **Results & Conclusions** This study illustrates that *Bhramari Pranayama* plays an important role in prevention of mental health as well as curative effects on mental disorders like stress, anxiety depression. According to *Ayurveda*, regular practice of *Bhramari Pranayama* decreases the *Raja* and *Tamadosha* and increases *Satvaguna*, which further helps to build mental health. There is a considerable scope to study the effect of *Bhramari Pranayam* through clinical trials to develop the present study.

Keywords: *Bhramari pranayam*, prevention & promotion, Mental health.

INTRODUCTION

The WHO stress that mental health is "more than just the absence of mental disorders or disabilities." Peak mental health is about not only avoiding existing conditions but also looking after ongoing wellness and happiness. Mental health is an active state of internal equilibrium. Mental health indicates cognitive, emotional and behavioural well-being—mental health influence on daily routine, relationships as well as physical health. *Maharishi Patanjali* has advocated *Ash-tangyoga* for curative as well as preventive aspects for all physical and mental disorders. Out of these eight, *Bhramari Pranayam* is more effective exercise for the brain due to its humming sound, vibration is produced which affects the hypothalamus of the brain directly causing a resonance in mind, and it fills the whole body with calmness and happiness. Thus, *Bhramari Pranayam* helps to improve our mental health. There are many studies on the effect of *Bhramari Pranayam* on various systems, but there are only a few studies present on stress, anxiety, depression and other mental disorders.

Material & Methods- The present investigation is based on primary & secondary sources of data mainly collected from literature studies of various *Ayurvedic samhitas* & *Yoga* texts as well as numerous published research articles.

Review of Health & Mental Health as per Ayurveda & Modern Science:

As per WHO, health is defined as a state of complete physical, mental, social and spiritual well-being and not merely the absence of disease or infirmity. A sound mind in a sound body has been recognized as a social,

ideal for many centuries. Further WHO described Mental health as, "It is a state of well-being in which an individual realizes his or her abilities, can cope with the normal stresses of life, can work productively, and can make a contribution to his or her community."⁽¹⁾

Ayurveda explained health as a – *Samadosha*, *samagnichha*, *Samdhatumalakriya*, *Prasannatemendriya Manah*, *Swasthaettebhiiyate*. *Su su15\41*. According to *Sushruta*, man is said to be *Swastha* whose *Doshas*, *Agnis*, *Dhatus*, and *malas* in the state of equilibrium along with mental, sensory, and spiritual pleasantness and happiness. Physiological variations of *Doshas* occur as daily, seasonal, age, food. *Jatharagni* and *Bhutagni* are responsible for proper digestion of food. *Dhatvagnis* are accountable for the nourishment of *dhatus*, equilibrium state of *Agni* leads to the appropriate formation of body tissue, and disorder of *Agni* leads to different diseases. Equilibrium state *Dhatus* and *Mala* is essential for the maintenance of health and prevention of diseases. A pleasant state of the soul, sense organs and mind are defined as health. *Atama* means *Jivatma* or *Karma Purusuh* who experiences all feelings like pleasure, pain etc. Even though the soul is devoid of blemishes as he is in association with the body, he experiences good and bad effects. Suppression of mental urges like desire, hatred, greediness, passion, following principals of *Sadvritta*, *Achararasayana* and *Yoga* help to keep the mind healthy. Thus, one can prevent psychological, somatic and psychosomatic disorders.⁽²⁾

Veekaro dhato vaishyamyam samyam, prakrutee, vruchyatey! Sukhyasadhyakum Arogyam, Veekaro, Du-khmevachya! (CS 9/4) Abnormal state of *dhatus*, which

produces unhappiness is a disease, and a balanced state which provides happiness is *Prakriti* or Health, i.e. *Arogya*. Thus, to prevent mental health diseases, one should adopt daily seasonal regimens, proper diet, *Yoga*, *Pranayama* and meditation. Suppression of psychological urges like desire, hatred, greediness, passion, following principles of *Sadvritta*, *Acharrasayan* and *Pranayam* helps to keep the mind healthy. Applying these, one can prevent psychological, bodily and psychometric disorders^[3] *Avidya*, *Asmita*, *Raga*, *Dvesha*, *Abhinivesha* are the five “*Klesha*”^[4] factors which can cause trouble in our day to day life. For diminishing these *Kleshas*, we should try to moderate the emotions in our daily life. These *Kleshas* constitute particular behaviour or mental state of that individual, such as aggressiveness, irritability, and rebelling nature. This type of personality has an inbuilt habit of developing stress, anxiety, and depression. The cultivation of *Satvik* character, i.e., pure, noble, and honest, and selfless attitude, is the need of the hour for ideal mental health. *Maharshi Patanjali* has advocated four essential things to be observed viz. Friendship, compassion, joy, and forgiveness. *Abhyasa* and *vairagya* are also vital to deal with stressors^[5]. *Pranayama* has been assigned a vital role in *Asthanga Yoga* and is very beneficial for keeping sound mental health. Out of these eight *Pranayamas*, *Bhramari Pranayama* brings stability, calm the mind, and improves blood circulation, effective for insomnia, instant way to relieve tension, anger, anxiety. *Bhramari* helps in increasing the concentration of the brain by humming sound, which is produced during the breathing, gives more interest to the subject for the practice in the *Pranayama*.^[6] Mental and behavioural disorders are found in people of all regions and all age groups. In India, as per the survey of mental health, the morbidity rate is 18-20 per thousand populations^[7]. Thus, the present study was carried out for the effect of *Bhramari Pranayama* on mental health. Current therapies available for the management of mental diseases are valid, but the problem of tolerance and physical dependence on their prolonged use, lots of side effects may occur. Therefore, the drugless and time effective *Bhramari Pranayama* is beneficial to reduce the symptoms of mental diseases. In Ayurveda, the interrelation

between mind and body is described in detail. The physical illness leads to disturbance in mental function, and mental disturbances lead to physical disorder^[8]. While describing psychological disorder, *Acharya Charaka* has quoted word *Chittodvega* along with *Kama*, *Krodha*, *Moha*. It is a more applicable term to illustrate the whole mental state.^[9] Therefore, *Chittodvega* is included in *Manasroga* and compared with a mental disorder. In this review, we want to explore the relationship between the stress, anxiety and depression included as mental health

Factors affecting mental health -

Lobha, *Shoka*, *Bhaya*, *Krodha*, *Abhimana*, *Nairlajja*, *Irsha*, *Atiraga*, *Abhidya*.^[10] Not having control over *Dharaniyavega* is one of the reasons for *Manas Roga*. One whose mind is inflicted by passion, anger, greed, exhilaration, fear, confusion, exhaustion, grief, anxiety, excitement etc^[11]. Antagonistic (*Viruddhaahar*), defective (*Dushtabhojan*), and contaminated food (*Asuchibhojan*), an insult to Gods, teachers, and *Brahmnas*, mental shock due to fear. are also the causes of *Manasvikar-Himsa* (torture), *Steya* (robbing), *Anyathakama* (unlawful sex), *Paisunya* (harsh speech), *Anrtavacana* (untruth), *Sambhinnaalapa* (speech causing separation), *Vyapada* (quarrel), *Abhidya* (jealousy), *Drgviparyaya* (misunderstanding).^[12] Always follow *dashvidhapakarma* is one more cause for manas vikar. Not following *Dincharya*, *Ratricharya*, *Rutucharya*, *Sadvritta*, *Achar rasayan* *Aharvidhivisheshayatan*, *Dwadashaharpravichar* is a more important factor for having *manas vikar*.

Mental disorder according to Ayurveda- *Moha* (confusion), *Shoka* (grief), *Vishada* (anguish), *Abhyasuya* (jealousy), *Irshya* (envy), *Bhaya* (fear), *Aswapna* (insomnia), *Chittodvega* (anxiety), *Tandra* (stupor), *Dainya* (meanness of inferiority complex), *Atinidra* (excessive sleep), *Harsha* (exhilaration), *Bhrama* (confusion), *Kama* (desire), *unmada* (psychosis), *Krodh* (anger), *Apasmar* (epilepsy), *Lobha* (greed) *Apatanaka patantrak*, *Mada* (ignorance), *Attatvaabhinivesh* (obsessive *Mana*(pride) syndrome), *Ashabdashravan* (auditory hallucination), *Madatyaya* (alcoholic psychosis), *Sanyasa* (coma), *Bhayaj* and *Shokajaatisara*, *Kamaj* and *Shokajvara*^[13].

Preventive measures of mental health- Following *Dincharya, Ratricharya, Rutucharya, Achar Rasayan, Sadvrittapan* by intake of *Sattvikahara*, Practicing *Ashtangyoga* (*Yama, Niyam, Asan, Pranayama, Pratyahara, Dharana, Dhyana, Samadhi*)^[14] Acharya has mentioned *Pranayama* plays a vital role to reduced *Sharirik* and *mansikvikar*.

Pranayama means a voluntary and temporary pause in the movement of the breath; it is the door between the physical existence and the spiritual path.^[15]

Regular practice of *Pranayama* removed the covering on the light of Knowledge and mind is prepared to focus on a particular subject like *Dharana*.^[16]

Bhramari Pranayama- *Bhramari Pranayama* is one of the best breathing exercises mainly for the brain. *Bhramari* is a Sanskrit word that is derived from '*Bhramar*' the black Indian bumblebee. It describes the characteristic humming sound which is produced while exhaling.^[17]

The procedure of *Bhramari Pranayama-*

Purvakarma- Sit in any comfortable *Sukhasan* position with an erect spine and stable mind, relax the body. Keep the eyes closed throughout the practice. The practice of *Puraka Rechaka* for ten rounds *Pradhankarma*. It should be practised with *Shanmukhi* mudra. Close the ears with the thumb, index finger on the forehead and middle fingers on eyes and ring fingers on nostrils and little fingers on above lips. Inhale (*Puraka*) slowly and deeply through both nostrils. Listening to the sound of the breath. After inhalation do *kumbhaka*, by keeping the mouth closed, *Rechaka* (exhale) should be done gently, making a pleasant, slow-pitch humming sound like a Bumblebee. Feel the vibration all over the body and mind. It refreshes the mood by inducing positive energy and real happiness. It is one round, and one should practice it from five rounds up to twenty rounds as per own capacity. *Pachyatkarma* Then do the ten rounds of *Puraka & Rechaka* for Relaxation.

Matra and Kala- Practice of *Puraka and Rechaka*, i.e., 1:2 *Matara Bhramari Pranayama Matra -Puraka 12 Matra Kumbhak Matra Rechaka 24 Matra*. This is *awarmattra*. *Kala* - 4 times in a day. In morning, afternoon, evening, and midnight^[18].

Benefits of *Bhramari Pranayama* – While a quick force of inhalation (*Puraka*) one should produce high pitch humming sound like that of a male bee while doing (*Rechaka*) exhalation, a humming sound is produced like that of a female bee. It fills the body and mind with positive energy and real happiness. *Bhramari* forms vibration in the brain, and it calms the mind, relieves cerebral tension, relieves stress & anxiety. Disparate anger, lowers blood pressure, bolsters the health of the heart, strengthens & improves the voice induced Sound sleep.⁽¹⁹⁾

Factors affecting Mental Health as per Modern Aspect

Childhood abuse, trauma, or neglect, social isolation or loneliness, experiencing discrimination and stigma, social disadvantage, poverty or debt, bereavement (losing someone close to you), severe or long-term stress, having a long-term physical health condition, unemployment or losing your job, homelessness or poor housing, being a long-term carer for someone, drug and alcohol misuse, domestic violence, bullying or other abuse as an adult, significant trauma as an adult, such as military combat, being involved in a serious incident in which you feared for your life, or being the victim of a violent crime, physical causes – for example, a head injury or a neurological condition such as epilepsy can have an impact on your behavior and mood. Although lifestyle factors including work, diet, drugs and lack of sleep can all affect your mental health, if you experience a mental health problem, there are usually other factors as well.⁽²⁰⁾

Warning signals of poor mental health- Always worried, poor concentration, sadness, short-tempered, regular insomnia, wide fluctuations in mood, feelings of guilt or low self-worth, afraid without cause. Without physical cause, numerous aches and pains.

Mental Disorders According to Modern aspects- Alzheimer's disease, Dementia, delirium, harmful use of alcohol, opioid dependence syndrome, Schizophrenia, mood disorders, effective bipolar disorders, depressive episode, generalized anxiety disorder, behavioural syndrome, and physical factor, e.g. Eating disorder

ders and sleep disorders., Mental retardation, Emotional disorders, hyperkinetic disorders, conduct disorders, unspecified mental disorders.⁽²¹⁾

RESULTS AND DISCUSSION

The data obtained from various texts books and review articles about the effect of *Bhramari Pranayama* on mental health, all studies show the curative as well as the preventive effects of *Bhramari Pranayama* on stress, anxiety, depression. Even though the reviews are very few, it creates a floor for further research in this field. There is a vast area unexplored on the effects of *Bhramari Pranayama* on mental disorder. On that aspect, [Vialattle et al. 2008] EEG studies have shown increased theta activity, and paroxysmal gamma waves following the *Bhramari Pranayama* bring positive thoughts and feelings of happiness^[22]. The regular practice of *Bhramari Pranayama* increased parasympathetic tone, decreases sympathetic activity, and improves cardiovascular and respiratory functions, reduced the effect of stress and strain on the body and improves mental and physical health.[Bhargava et al 1998, Thangavel et al 2014]^[23] Previously studies [Jain et al 2011 and Rampalliwar et al 2013] have mentioned that *Bhramari Pranayama* also reduces cardiovascular reactivity to stress[cold pressure test] by inducing parasympathetic predominance and cortico- hypothalamic medullary inhibition^[24]. [Diwakar pal et al 2016] found that the experimental group[doing [Bhramari Pranayama] improved to reduce anxiety levels than the controlled group^[25]. [Shrivastav et al 2016] have mentioned that *Bhramari Pranayama* stimulates the reflex of the Autonomic nervous system and, in turn, the level of noradrenaline and neurotransmitters in the nervous system increase with a deeper breath and resonate while exhaling. This secreted noradrenalin helps to decrease the level of neurohormones responsible for stress, anxiety, and aroused mental state in deeper form through biofeedback mechanism.^[26]

CONCLUSION

Acharya Charak stated that *Raja and Tama* are the chief pathogenic factors of mind, and due to them, a lot of *manas vikar* are produced. The regular practice of

Bhramari Pranayama decreases the *Raja and Tamadosha* and increases *Satwaguna*. From the above discussion, it is concluded that the daily practice of *Bhramari Pranayama* produces acoustic vibrations, and this vibration could have a significant impact on brain tissues. It is an excellent stretching exercise by one's voice. It influences multiple systems in the body like respiratory, autonomic nervous systems; hence its effects on total emotional status as well as mental disorders like stress, anxiety, and depression. Thus, more clinical trials are essential to study the effect of *Bhramari Pranayama* on mental health. Therefore, *Bhramari Pranayama* is a crucial part of our daily stressful life for preventive as well as curative aspects for mental health.

REFERENCES

1. K. Park Preventive & Social Medicine .23rd edition 2005, page number 831,832.
2. Dr. Anantaram Sharma Sushrut Samhita Vol. 1, Choukhambha Surbharti Prakashan, editor, Reprinted
3. ed., 2009, pp. 130 Sutrasthan, dosh dhatus mal kshaya vrudhi vidyananiya adhyay 15/41.
4. Brahmanand Tripathi, Charak Samhita, Vol.1, Choukhambha Surbharti Pratishthan, editor, Reprinted ed.2006 Chikitsasthan 9/4.
5. Swami Hariharananda Aarnya, Patanjali Yoga darshanam, Motilal Banarsidas, editor,1980, samadhiapad ,03
6. Swami Hariharananda Aarnya, Patanjali Yoga darshanam, Motilal Banarsidas editor,1980, samadhiapad ,12
7. Kuppusamy Maheshkumar, Dilara Kamaldeen, Ravishankar Pitani and Julius Amaldas, "Immediate Effects of Bhramari Pranayama on Resting Cardiovascular Parameters in Healthy Adolescents", Journal of Clinical and Diagnostic Research.Vol-10(5), :17-19, 2016
8. K. Park Preventive & Social Medicine. 23rd edition 2005, page number 831,832
9. Dr. Anantaram Sharma, Sushrut Samhita, vol.1, Choukhambha Surbharti Prakashan editor, Reprinted ed. 2009 pp.3 sutrasthan, vedotpattiridhya 1/3.
10. Brahmanand Tripathi, Charak Samhita, Vol.1, Choukhambha Surbharti Pratishthan, editor, Reprinted ed.2006 pp. 596 Viman Sthan, Roganikviman adhyaya6/5.

11. Brahmanand Tripathi, Charak Samhita, Vol.1, Choukhambha Surbharti Pratisthan, editor, Reprinted ed.2006 Sutrasthan 7/26,27
12. Brahmanand Tripathi, CharakSamhita, Vol.1, Choukhambha Surbharti Pratisthan, editor, Reprinted ed.2006 Nidansthan 7/4.
13. Kaviraj Atredev Gupta, Ashtang Hridaya Choukhambha Prakashan editor, Reprinted 2008 Sutrasthan 2/21-22.
14. <https://www.researchgate.net>.
15. Swami Hariharananda Aarnya Patanjali Yoga Darshanam, Motilal Banarsidas editor,1980, pp. 282-283 sadhanapad, 2-29.
16. Swami Hariharananda Aarnya Patanjali YogaDarshanam, Motila lBanarsidas editor, 1980, pp. 282-283 sadhanapad, 2/49.
17. Swami Hariharananda Aarnya Patanjali Yoga Darshanam, Motilal Banarsidas editor,1980, pp. 282-283 sadhanapad, 2/52-53.
18. Swami Muktibodhananda, Hathyoga Pradipika,-Light on Hatha Yoga", Yoga Publication Trust ,Munger ,Bihar Edt.3rd -1998 ,Reprinted 2006 pp.260Shatkarma and pranayama, 2/68.
19. Hatha Yoga Pradipika- Swami Muktibodhanand light on Hatha Yoga Bihar School of Yoga Pg. No. 173 Sh.No. 11.
20. Banyan botanicals
21. www.medicalnewstoday.com/depression
22. K Park Preventive & Social Medicine K.Park 23rd edition 2005, page number 831,832
23. Vialatte, F. B., Bakardjian, H., Prasad, R., & Cichocki, A. (2009). EEG paroxysmal gamma waves during Bhramari Pranayama: a yoga breathing technique. Consciousness and cognition, 18(4), 977-988
24. Bhargava R, Gogate MG, Mascarenhas JF. Autonomic responses to breath holding and its variations following pranayama. Indian J Physiol Pharmacol 1988; 32:257-64.
25. Jain, G., C. Rajak, and S. Rampalliwar. "Effect of bhramari pranayama on volunteers having cardiovascular hyper-reactivity to cold pressor test." J Yoga Phys Ther 1 (2011): 102
26. Pal Diwakar. "Effect of Bhramari Pranayama on the state of anxiety on sedentary male from Gwalior.

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A CONCEPT OF PURISH (MALA) AND DEFECATION PATTERNS- REVIEW ARTICLE
Prof. Dr. Kalpana K. Jadhav^{1*} and Dr. Siddharth Rajaram Gupta²
¹HOD, MD Swasthavriita, Yashwant Ayurvedic College PGT & RC, Kodoli, Tal- Panhala, Dist- Kolhapur.

²PG Scholar, Swasthavriita Department, Yashwant Ayurvedic College, PGT & RC, Kodoli, Tal- Panhala, Dist- Kolhapur.

***Corresponding Author: Prof. Dr. Kalpana K. Jadhav**

HOD, MD Swasthavriita, Yashwant Ayurvedic College PGT & RC, Kodoli, Tal- Panhala, Dist- Kolhapur.

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ABSTRACT

Ayurveda gives special emphasis to Mala that is why it's included in trya aupstambha. Sharir is the basic thing through which the three purusharths mentioned in Ayurveda can be achieved, so it becomes essential to know the body composition. In Ayurveda the concept of formation of body is mentioned as "Dosha Dhatu Mala Mulam hi Shariram". That's why Ayurveda science has given vast detail of Purish (mala) like what should person eat (Ahara) according to his temperature, excretion of mala, time of defecation and consistency of purish according to diseases. The above objectives have been discussed with the help of various references found in Ayurveda texts and modern anatomical, physiological are concluded that purish vaha strotas can be correlated to the large intestine and its defecation positions of the modern concept.

KEYWORDS: Purish, Mala, Faeces, Defecation, Sitting posture, Squatting posture.

INTRODUCTION

Ayurveda is a science of Life. In Ayurveda what is beneficial to human being and what is not is described in detail. The basic aim of Ayurveda is to cure the *Atura* and to maintain *swasthya* of *swastha*. (C.Su.30/26). The *swastha* individual is one whose all systems are working within the normal limit and he must have his *Dosha*, *Dhatu*, *Agni* and *Mala kriya* in same state. The basic principle of Ayurveda medicine is based on a natural and preventative means of addressing and curing the root cause of diseases. It emphasizes, restoring the natural balance of the body. A specialized branch called the *Swasthavritta* is present in Ayurveda, which means the science for complete maintenance of health. *Dinacharya* and *Ritucharya* have been mentioned in *swasthavritta* as a healthy lifestyle habit. The present century has been declared to concentrate on lifestyle disorders by WHO and fortunately Ayurveda an ample scope to contribute allot in this field to the world because Ayurveda has total understanding about the nature and person. So, far as small topic has been chosen to consider of its great value to correct some primary steps of lifestyle disorders.

Most of diseases are caused by *Mandangni*, *Malasanchaya* and *vegadharana*. Here we concentrate on *Mala*. Ayurveda has told about *Dinacharya*, *ratricharya* and *ritucharya* for healthy life. *Malautsarjan* is one of the important *upkrama* in

dinacharya. If *malautsarjan* is improper it causes various diseases.

रक्षार्थमायुषः स्वाथो जातवेग समुत्सृजेत् । (A.S.Su.3/3)
प्रवर्तयेत् प्रचलितं न तु यत्रादुदीरयेत् । (A.S.Su.3/4)

So, *Defecation* patterns affects directly on health of individual if not done correctly. Whether there are many factors responsible for *defecation* like *Agni*, *koshtha*, exercise, water intake, sleep, mental condition like stress etc.

The human concept of defecation techniques has evolved over time accompanied by positions of passing stool. Indian toilets or squat toilet are commonly used in every civilization from past decades but in new era, western toilet are used which are easy & comfortable but led to many colon diseases because of its incorrect sitting posture. Position of passing stool in both toilets are differently used which has its own advantages & disadvantages that may affects the health of an individual. Defecation pattern in Indian toilet pattern, sitting posture angle is 35^0 and in western toilet pattern sitting posture angle is 90^0 which led to the choked rectum thereby making it more difficult to pass stool.

Concept of Purisha

Nirukti – पुरीष- पृ

The word *purisha* is derived दृ *Dhatu*. मलिनीकरणात् आहारमलत्वात् मलाः। - अ.सं.सु.२०/७

Paryay

Avaskara – feces, *Uchchara* – feces, *Kitta* – excretion, dirt, *Gu* – Going (out from body), *Gutha* – feces, *Purisha*, *Purishana* – feces, dirt, excrement, *Varchas*, *Varchaska* - excrement, feces, *Vishthha* – voiding, excrement.

Meanings of all above *Paryaya* indicate *Malinabhava* or *Tyajyatva* of *Purisha*.

Formation of Purisa

Purisa is the final excreta which is eliminable from the body after all the digestion, metabolism process which is unable to transport into the circulating bio matter. In *Ayurveda*, two specific and different channels or *srotasa* are defined in one common alimentary canal. With overall study of this grand *srotasa* i.e. alimentary canal in contemporary view performs multiphase digestion and metabolism commences from buccal cavity and terminates till rectum. The concept of *pakwasaya* is very specific in *Ayurveda* that does not deal with any small or large organ but largely resembles with large intestine.

After two phase digestion of *kapha* in *madhura avasthapaka*, *pitta* in *amla avasthapaka*, the third and major metabolism of *vata* takes place in this portion. *Pakva-annarasa* after a residual process of *kapha* and *pitta* formation enters into *pakwasaya* for expecting and analyzing the *rasa* and *mala* with the help of *samanavayu* after the process of villous absorption of source bio matter, the remaining unabsorbed fluids and solid waste called *Aharamala* is comprised of ***mutra*** and ***purisa***. Major fluids extracted as not useful waste matter coming out from *mala dharan kala* and form the urine for further filtration to respective organs. After extraction of liquid *paripindita* or solidified waste matter residue is called ***purisa***. But *pakwasaya* is the seat of third *avasthapaka* i.e. *katu avasthapaka* and *katu bhava* of this bio substance produce *poshak vata*. This *purisa* has a specific organ i.e. *purisasaya* or rectum to stay.

Utpatti of Purisha

After the in taking of food the digestion of the food takes place with the help of *jatharangi* and *panchabhatagni* and that digested food is divided into two parts i.e. *Kitta bhaga* and *Sara bhaga*. Again the *Kitta bhaga* is having two parts i.e. *Drava bhaga* is called as *mutra* & *Ghana bhaga* is called as *purish* or *shakrut*. According to *Charaka*: When the part of food enters into the *pakwashaya* then it will become dry due to the presence of *Agni* and attains *pindaswarupa*. During this process due to *Katu rasa* the *Vridhi* of *Vayu* takes place. *Paripindit pakwasaya* means, during the process of formation of *mala* or *purish*, the remaining food material

which is waste will get the *pind roop* and thus the *purisha utapatti* will occur.

Purish Kriya: *Purish* does the *Dharana* of *shareera* and also bears the *vayu* and *Agni*. These are the two main constituents of *prana*. As the strength of an individual is under control of *Shukra* in the same way the life of an individual is under control of the *mala*.

Panchbhoutic Swroop of Purisha

Purisa contains predominantly 2 of 5 basic elements namely *prithivi* and *Vayu*. Its color is yellow and it is due to bile pigments (i.e. *pitta*) present in stool. It is slightly pungent in taste and has natural bad smell. It is having *Ghana swaroopa*.

Swaroopa of Sama purisha: Undigested food is more combined with *vatadi doshas Durgandhayukta* Comes in little quantity.

Swaroopa of Nirama Purisha: *Vata dosha rahita, Durgandharahita*, Person feel lightness after defecation *Purish* is *panchabhautika* and having *Agni* and *Vayu mahabhu* predominance. Color of *purish* is yellow i.e. color of *pakwa pitta*. *Rasa* of *purish* is *katu rasa* *Purish* has got the particular bad odor.

Pramana of Purisha - *Pramana* of *Purisha* in *Sharira* is 7 *Anjali*.

Purisha Karma - *Avasthambha* is function of *Purisha*. *Avashtambha* means *Shariradharana*. *Purisha* performs this karma till it is present in *Sharira*. So properly formed *Purisha* gives strength to body. *Acharya Sushruta* has quoted that *Purisha* performs *Vayu* and *Agni Dharana* i.e. *Purisha* gives strength to *Vayu* and *Agni*.

Excretion of Purisha - After performing its *Sharira Dharana* function, *Purisha* gets excreted out of body under the influence of *Apama Vata*.

Site of Formation of Purish- Colon (*Purishvaha strotas*) is a site of formation and excretion of stool. Large Intestine (*Pakwashaya*) and Anal canal (*Stula Guda*) are roots of Colon.

Purishavega - Urge of defecation is called *Purishavega*. *Vega* is natural urge of body like hunger, thirst, micturition, defecation etc. Psychological feelings are also considered as *Vega*. Urges related to *Sharira* are called *Sharirika Vega*. These are called as *Adharaniya Vega* because these are not supposed to be held. Urges related to mind are considered as *Manas Vega*. These are called as *Dharaniya Vega* because these are supposed to be held. *Purishavega* comes under *Adharaniya Vega*.

Purishavegadharanajanya Lakshana - According to *Charakacharya*, *Purishavegadharana* causes *Pakwashaya Shula*, *Shira Shula* (headache), *Adhovata* and

PurishaApravartana (no passage of flatus and stool), Pindikodveshtana (pain in calf region) and Adhmana. According to Sushrutacharya, Purishavegadharana causes Atopa, Shula, Parikartana (cutting type of pain in Guda, Basti), PurishaSanga (no passage of stool), Urdhvavata (frequent belching), PurishaPravrutti from Mukha.

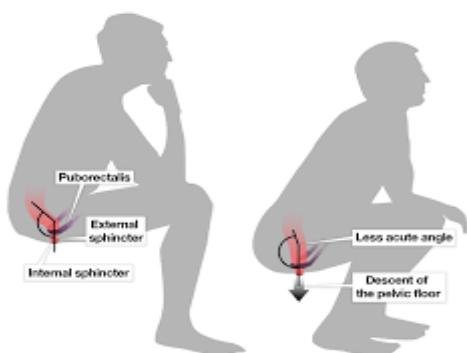
Frequency of Purishavega - In Svastha individual, frequency of Purisha Vega is two1. I.e. two times a day PurishaVisarjan Should be there. This can vary according to Prakruti. E.g.in Pitta Prakruti, Purisha Vega will be more.

Defecation

After complete digestion of food, the nutrient are absorbed and the waste products remaining in the *grahani* are known as *maladrava*. The separation of nutrients and waste products is added with *paakagni*. This *maladrava* constitutes two parts, one is liquid and the other part is deprived of liquid know as proto part of *purisa*. This proto part of *purisa* reaches *purisasaya* or *malasaya* (rectum) with the motion provided by *saman vayu*, known as *purisa* and stays here. Then it is excreted by the body through the anal canal by the propagation of *apana vayu*. In Ayurveda, process of *Vega* is not directly mentioned. With the help of supplementary references from compendia it can be fashioned. *Purisha* (feces) is the end product of digestion. It has to be eliminated out of body. The urge for excretion of *Purisha* is called *Purishavega* (defecation reflex). Initiation from *Atma*, *Indriya*, and *Manas* in conjunction with *Sparshanendriya* and *Vata Dosha* Process of *Purishavega* takes place.

Defecation Patterns

Humans use two types of posture to defecate: squatting and sitting. People use the squatting postures when using squat toilets (Indian toilet) or when defecating in the open in the absence of toilets. The squatting defecation posture involves squatting, or crouching. It requires standing with knees and hips sharply bent and the buttocks close to the ground. Squat toilets are designed to facilitate this posture. Squatting posture is a natural way and it allows an easy and smooth defecation. In this position, a person sits with knees and hips sharply bent and the buttocks close to the ground making an angle of around 35° angle.



Western pots are where on sits down with hips on pot and thigh semi flexed. This called SIT DOWN POSITION or WESTERN TOILET of passing stool. Western toilets are nowadays more popular, originated in Britain, from where it spread to rest of the western countries. The sitting posture toilets is used in that have a pedestal or "throne", where users generally lean forward or sit at 90° angle to a toilet seat. Usually, a person sits on a western toilet like he would sit on a chair. The position is basically a 90-degree position where your hips bend at that angle with respect to your upper body. Now, this position is extremely dangerous because it disrupts the passage of your intestines and literally, seals it off. These are the defecation patterns use for elimination of purish. In one study people using Indian toilet and western toilet were observed the problem they face during defecation in respective toilet, which result shows that squatting posture was better than sitting posture for proper elimination of faeces.

REFERENCES

1. Sharma P.V. Charak Samihita Text with English Translation Choukhambha Oriental Varanasi.
2. Charaka Samhitha by Acharya Agnivesha with Ayurveda deepika commentary by Shri chakrapanidatta edited by Gangadhara, Sanskrit text, Published by Choukamba surabharathi prakshan, Varanasi, reprint, 2011; 65.
3. Sushruta Samhitha of Acharya Sushrutha edited by Prof. K.R. Srikanthamurthy, English text, Published by Choukamba Publishers, Varanasi-1, Vol-1, reprint edition, Sharirasthana, 2008; 9/12: 382.
4. Ashtanga Hrudaya of Acharya Vaghbata edited by Prof. K.R. Srikanthamurthy, English text, Published by Choukamba krishnadas academy, Varanasi-1, Vol-I, chap-19,9th edition, Sutrasthana, 2006; 12/1: 192.
5. Sushruta Samhitha of Acharya Sushrutha edited by Prof. K.R. Srikanthamurthy, English text, Published by Choukamba Publishers, Varanasi-1, Vol-1, reprint edition, Sharirasthana, 2008; 4/26: 357.
6. Prof. K.R. Krishnamurthy - Vol. II , section II, Ashtang Sangraha by Vaghbhat, Chaukhamba Orientalia , Varanasi -5th edition, Sutrasthana, 2005; 20/5.
7. K. PARK, Parks textbook of Preventive and Social Medicine, Bhanot Publication, 23rd edition, Reprint, Waste disposal, 2015; 763.
8. Textbook of Anatomy and Physiology, Tortora and Grabovaski, John Wiley and Sons Pvt Ltd (Asia), reprint, 2011.
9. Charaka Samhitha by Acharya Agnivesha with Ayurveda deepika commentary by Shri chakrapanidatta edited by Gangadhara, Sanskrit text, Published by Choukamba surabharathi prakshan, Varanasi, reprint, Vimanasthana, 2011; 5/8: 252.
10. Ashtanga Hrudaya of Acharya Vaghbata edited by Prof. K.R. Srikanthamurthy, English text, Published by Choukamba krishnadas academy, Varanasi-1,

Vol-I, chap-19,9th edition, Sutrasthana, 2006; 3 / 4: 172.

- 11. Sushruta Samhitha of Acharya Sushrutha edited by Prof. K.R. Srikanthamurthy, English text, Published by Choukamba Publishers, Varanasi-1, Vol-1, reprint edition, Sutrasthana, 2008; 15/41: 42.
- 12. How Toilet Posture affects Your Health. Gate to Wellness. [Last accessed on 2018 Apr 07], 2017.
- 13. www.researchgate.net/publication/228504408_Influence_of_Body_Position_on_Defecation_in_Humans
- 14. www.wikipedia.com/defecation/Mala.
- 15. www.wikipedia.com/defecationposture.
- 16. www.pubmed.com.

IMPORTANCE OF SWATHA LIFESTYLE IN STRESS MANAGEMENT - A REVIEW**Dr. Siddharth Rajaram Gupta^{1*} and Dr. Kalapana K. Jadhav²**¹PG Scholar, Swasthavritta Department, Yacpgt & Rc, Kodoli, Kolhapur.²MD Swasthavritta, HOD, Department of Swasthavritta, Yacpgt & Rc, Kodoli, Kolhapur.***Corresponding Author: Dr. Siddharth Rajaram Gupta**

PG Scholar, Swasthavritta Department, Yacpgt & Rc, Kodoli, Kolhapur.

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ABSTRACT

In developing countries (including India) has led to people engaging themselves in converting time into money by this they are addicted to faultily lifestyle which playing important role in determining our Health all this is due to because people are very much far away from the meaning of health and importance of health form all dimensions i.e. physical, mental, social and spiritual. The judgment capacity of a stressed person is generally compromised and the faulty decision (known as pragyaparadha) is another important aetiological factor for several diseases (ibid). Thus, a vicious cycle is formed caused lot of stress to an already stressed person. They live in worry, tension, anxiety, fear & anger due to above factors & may suffer from the lifestyle related disorders such as hypertension, dyspepsia, indigestion, hyperacidity, diabetes, coronary heart disease etc. Such disorders can cause many other diseases or death. These diseases are often termed as 'Diseases of longevity'. Hence this work is intended to discuss the detail about Swasthya i.e. Health in Stress through Ayurveda.

KEYWORDS: Swasthya, Health, Stress, Mental Health, Lifestyle, Ayurveda.**INTRODUCTION**

The progress of human life largely depends on healthy body. The labour for money, status in the society & honour is not possible for an unhealthy man. As in Ayurveda also in a very deep concept they mention i.e "Dharma Artha Kama Moksha Arogya Mula Utamam, . Health is most important worldwide term for "developing and developed" countries. But still a confused and an unaware term for common people and to world also. Too many definitions were given for health but Usually the People misunderstood and tend to believe that physical health is everything and continuously try out different preventive & curative measures to keep their selves physically healthy but that also not in a proper ways or with misconceptions and generally tend to ignore the mind (thought center) & the soul (emotion centre) aspect of the health. Despite of fast progress made by modern medical science, there are continues rise in health related disorders and people start to give importance to health when they got any lifestyle disease element. All these practical things we are seeing in our society and we can clearly explain that we are not conscious about the real meaning of health, its importance and its management in our life. People continuously stretch themselves in order to deliver high performance to move up the career ladder but the actually meaning of life with all these is very important to understand i.e. Ayurveda says about the Ayu of human is four types Hita ayu in term of physically health Ahit

ayu in term of physically unhealthy Sukha ayu in terms of healthy mentally socially and spiritually and Dukha ayu in terms of unhealthy mentally socially and spiritually i.e Hita hitam sukham dukham ayutasya hita hitam manam chi tach yatrauktaayurved se auchataya. That's why we need to take holistic approach towards health and Ayurveda first aim is Swasthtasyavastya rakshnam then aturasvikkarpasaman ch.

Need To Understand Importance of Health

1. In Present era physical and mental lifestyle disorder are very common and the root cause is not focusing and understanding what health is and if a person understand this one term there is nothing left to him or her to understand.
2. The health having four dimensions i.e. Physical, Mental, Social and Spiritual and these all are dynamic process which changes daily, so let's focuses through Ayurveda, that why health is a dynamic process because as Sushruta says' kala he syambhu' means kala i.e. time is everything and all things in this universes depend on time and it can't be in a state, so as time changes health also changes in terms of its all dimensions.

Ayurvedic Lifestyle

Lifestyles are patterns of behaviour or ways an individual typically lives. A lifestyle typically reflects an individual's attitudes, way of life, values, or world view. Therefore, a lifestyle is a means of forging a sense of self

and to create cultural symbols that resonate with personal identity. Not all aspects of a lifestyle are voluntary. Surrounding social and technical systems can constrain the lifestyle choices available to the individual and the symbols she/he is able to project to others and the self.

Social values, following traditions, daily routine and behaviour – they all together are known as lifestyle. Along with all cultural and practical ways, man's personal habits are also included it. Many aspects of life style are learned from parents, elders, friends, college etc. The eating habits, the ways of communication with people, timings of eating, sleeping etc. are such normal things which seems to be very simple but even they influence the whole families, society's and personal health. The figure of scientific research shows clearly that there is a definite relation between lifestyle and health.

Lifestyle modification is effective as either psychotherapy or pharmacotherapy and can offer significant therapeutic advantages. Important Lifestyle modification include exercise, nutrition and diet, time in nature, relationships, recreation, relaxation and stress management, religious or spiritual involvement, and service to others. Greater awareness of lifestyle factors offers major advantages. Lifestyle factors can be potent in determining both physical and mental health. In modern affluent societies, the diseases exacting the greatest mortality and morbidity— such as cardiovascular disorders, obesity, diabetes, and cancer— are now strongly determined by lifestyle. Differences in just four lifestyle factors—smoking, physical activity, alcohol intake, and diet—exert a major impact on mortality, and —even small differences in lifestyle can make a major difference in health status.

The importance of a healthy, balanced lifestyle is widely advocated within developed nations; here it is commonly perceived that the demands of modern living often exceed people's ability to cope with them. The assumptions about lifestyle balance are that a life congruent with one's values, skills and interests, composed of daily health habits, and relatively low in chronic stress will relate to positive life outcomes such as life satisfaction and quality of life. Additionally, we identify known indicators of imbalance, since much can be learned about healthy lifestyles by examining activity patterns that seem clearly unhealthy, stressful, or incongruent. Some of these tips may require a change in behavior, others may be ways to adjust the environment or schedule so not everything happens at once. The excuses have to stop. The attempts are to be made for necessary lifestyle changes to live longer and more healthfully.

Faulty Lifestyle, Highway to Formation of Psychosomatic Disease

Lifestyle is the way in which a person lives. Ayurveda opines that the way of living is the reason for both health

and disease. Not following the prescribed daily / seasonal regimen, dietary rules and regulations, having sedentary lifestyle all lead to disturb the level of health. Almost 95% of diseases all over the world are caused by a —faulty lifestyle, says a latest book on the effect of lifestyle on people's health. A faulty lifestyle also includes eating the wrong food at the wrong time at the wrong place, in a wrong manner, in a wrong dose, in a wrong environment, excess consumption of alcohol, sedentary life and so on. There are lots of researches which have proved that a faulty lifestyle ends up in various health conditions leading to diseases. This is an important and common cause for stress.

Ayurveda very clearly mentions that Chesta Dewsha (~sedentary lifestyle) will lead to increase in Kapha and Medas and also various diseases related with over nutrition. Once the consumed macronutrients are not converted into energy and used up, they tend to get settled as triglycerides in adipose tissue especially in skeletal muscles. Lack of exercise leads to diminished mitochondrial lipid oxidation. The hampered skeletal muscle lipid turnover leads to hypertriglyceridemia. Many studies also have proved that sedentary lifestyle is important cause for psychosomatic diseases.

Managing Stress Through Lifestyle Modifications

- Balanced diet
- Avoid smoking & alcohol
- Regular exercise
- Sleep on time & proper duration
- Leisure
- Relaxation process as shown in below picture.

Health in Ayurveda

Perfect health in the Ayurveda system involves not only physical wellness, but also emotional, mental, and spiritual wellness. Mind, soul and body – these three are like a tripod; the world is sustained by their combination; they constitute the substratum for everything. This (combination of the above three) is Purusa; this is sentient and this is the subject matter of this Veda (Ayurveda); so it's brought to light. The term —Ayus" stand for the combination of the body, sense, organs, mind and soul, and its synonyms are dhari – the one that prevents the body from decay, jwita – which keeps alive, nityaga – which serve as a permanent substratum of this body and Anubandha – which transmigrates from one body to another. As it is beneficial to mankind in respect of both the worlds i.e. this life and the life beyond, Ayurveda, the most sacred and honoured by those proficient in the Veda will now be expounded (C.Su. 1/ 42,46,47).

Psychosomatic Considerations in Ayurveda

The study of mind is called as Psychology. The profounder of Ayurveda were probably the first who gave detailed description of mind and body relationship. They clearly stated that, the mind and body are two separate entities. The sense faculties are capable of

perceiving their respective objects only when they are motivated by the mind. Mind, on the other hand, transcends all sense perception. It is known as 'sattva'; some call it 'cetas'. Its action is determined by its contact with its objects like happiness, misery etc., and the soul; this acts as a driving force for all the sense faculties. (C.Su. 8/4,7).

The word Manas is came out from the Dhatus and it forms the meaning of this is through which we are collecting the knowledge and objects that is called as Manas.

Primary psychological conditions caused purely by mental disorders are Kama (lust), Krodha (anger), Lobha (greed), Moha (delusion), Irshya (jealousy), Mana (pride), Mada (euphoria), Shoka (sorrow, grief), Chinta (anxiety), Udvega (neurosis), Bhaya (fear), Harsha (happiness).

The psychiatric conditions caused by a combination of physical and mental (psychophysical) disorders are Unmada (psychosis), Apasmara (convulsive disorder), Apatantraka (hysteria), Atattvabhinvisha (obsession), Bhrama (illusion, vertigo), Tandra (drowsiness), Klama (neurasthenia), Mada-Murchha-Sanyasa (loss of sensory perception due to coma), Madatyaya (alcoholism), Gadodvega (hypochondriasis).

Ayurvedic Psychology Charaka in his treatise Charaka Samhita describes eight essential psychological factors that are negatively affected in various ways in all psychiatric disorders. The psychopathological condition is a function of these factors, which are Manas (mind), Buddhi, Smriti (memory), Sajna Jnana (orientation and responsiveness), Bhakti (devotion), Shila (habits), Cheshta (psychomotor activity) and Achara (conduct). Compared to other major Ayurvedic texts like Sushruta Samhita, and Ashtanga Hrdayam, Charaka Samhita gives more emphasis to the view of life as a self-aware field of pure consciousness and natural intelligence where the knower and the known are one. Ayurveda is very effective for stress management and to encourage body and soul to achieve composure of the mind (Ramesh and Kurian, 2013).

Stressors

Stressors (Stress inducing factors) recognized in Ayurveda can be classified as those causing physical stress, like excessive physical exercise, vigils, fasting, injury, exhaustion, uneven body postures, or psychological, like, anger, fear, grief, anxiety and environmental, like, high altitudes and prolonged exposures to intense heat of sun and fire.^[26] Unhealthy food, irregular and improper routine and mental perturbations like Bhaya (fear), Krodha (anger), Soka (grief), Loba (greed), Moha (attachment), Ayasa (confusion) etc. cause all types of morbidities. The role of psychological disorders in the causation of stress has also been stressed by Cakrapani.

Nidraharatwam rasayanasaya vaikaridraharratwena kim va devavat sarvada prabuddho nidraharitow bhawathi. (C.S.Ci. 1/2/3).

Further, excessive use or inappropriate / unhealthy use of sensory organs also plays an important role in the aetiology of several diseases.

Tab yatha- kalaviprayah, Pragyaparadhhah, Sabdasprasaruparasagandhascasatmyaiti. (C.S.Su. 28/7).

The causes of the diseases relating to both mind and body are three fold wrong utilization, non-utilisation and excessive utilization of time, mental faculties and objects of sense organs.

Signs of Mental Health Ass Per Ayurveda

- Good memory
- Taking the right food at the right time
- Awareness of one's responsibilities
- Awareness of the self and beyond self
- Maintaining cleanliness and hygiene
- Doing things with enthusiasm
- Cleverness and discrimination
- Being brave
- Perseverance
- Maintaining cheerfulness irrespective of the situation
- Fearlessness in facing situations
- Sharp intellectual functioning
- Self-sufficiency
- Following a good value system
- Ability to proceed steadily against all odds.

Ayurveda Treatment Methods

The Pancha Karma measure used are

1. Vamana - induced therapeutic vomiting
2. Virechana - purgation through therapeutic laxative, providing symptomatic relief of mental illness.
3. Vasti - enema therapy. Nirooha Vasti cleanses toxins from the dhatus and removes naturally accumulated body wastes from the colon. Anuwasana Vasti is to be retained in the body for a longer period for effectiveness
4. Nasya - Nasal medication acts as a purificatory aid to the head where major sensory faculties are located. The clarity of these faculties (indriya prasada) leads to clarity of mind. Special Techniques are used whereas include
5. Shirodhara - medicated water, herbal oils and medicated milk are poured on the forehead through a special method for 30 to 45 minutes. It reduces anxiety, depression and mental stress and rejuvenates the central nervous system.
6. Shiro Vasti - keeping herbal oil in a cap fitted on head.
7. Panchakarma therapy is followed by samana or purification treatment with oral medicines including herbal powders.

- Anti-stress effect against stress related changes in immunoglobulin in the body due to the battery of stresses encountered at Antarctica, Rasayana therapy has an advantage over the conventional Kayachikitsa treatment in such conditions, as it is capable of counteracting the stress, promote the adaptogenic abilities of the body, enhance mental endurance.

Ayurvedic Lifestyle Modification

Lifestyle is the way in which a person lives. Lifestyle changes can promote in the management of stress. A healthy lifestyle involves right quantity and quality of food and regular exercise which helps a person to be in complete state of physical, social and mental well-being, whilst having the ability to meet the demand of the environment without undue fatigue. —Following of daily and seasonal regimen is the best lifestyle that can be adopted by a person to be healthy says Ayurveda.

Ayurveda science is designated as Ayurveda where advantageous and disadvantageous as well as happy and unhappy life alongwith what is good and bad for life, its measurement and the life itself are described — vide sutra. Good health stands at the very root of virtuous acts, acquirement of wealth, gratification of desire and final emancipation from the world. Diseases are destroyers of health, well-being and life. (C.Su. 1/41,15).

Actually Ayurveda is to control stress & great remedy for stress & stress relief. Ayurveda provides a combination of benefits such as Pancha karma and Medya Rasayanas (medicines) practice and guided Swastvritta as an Ayurvedic lifestyle modification for the prevention, promotive & curative effective in the management of stress. Ayurveda teachings suggest a lifestyle, which helps to achieve life goals & also prevent from various lifestyle related disorders & disease. Ayurveda, thus, is a science to prevent disease & maintain ongoing positive health. The following are the main rules related to lifestyle that one should follow in order to achieve positive health & a longer & happy life — Ahara Niyamas (Dietary Principles), Nidra (Sleep), Brahmacharya (Regulated sexual (activities), Dincharya (Daily Regimen), Ritucharya (Seasonal regimen), Vyayama (Exercises), Sadvritta (Good conduct / Social behavior). (C.S.Su. 1/67).

CONCLUSION

‘Svastha’ is Free from the disease i.e. healthy and the regimens followed to keep one self-healthy is ‘Swasthvrutta’. It is defined as a state of resistance through the defence activities of human body against the disease. And this can be attained by getting proper nutrition, minimal exposure to pollutants, reducing stress in one’s life. Charaka gives the ways to live in accordance with the nature. Overall the explains the ways to Sukhayu and Hitayu and gives stress on preventive and social medicine. Let’s make understand it to the common people from all dimensions like physical

and specially the mental, so all can understand the Aim of life i.e. Dharma Artha Kama Moksha and this can be only attain by a healthy person. So the future generation of the Indian and world can be free from all kind of physical and mental life style disorders. This module is prepared with an intention to create awareness about holistic aspects of health through Ayurveda and full world need to understand this concept and follow. Thus following proper lifestyle described in Ayurveda any person can attained proper ‘Svastha’ life.

REFERENCES

- Achary Vidyadhar Shukla,Caraka samhita of aganivesa, hindi commentary, 1 ST Edition, Published by Chaukhamba Sanskrit Pratishthan, Varansi, 2015; 4: 1/ 15.
- Dr. Brahmanand Tripathi, Caraka samhita of aganivesa, hindi commentary,1ST Edition, Published by Chaukhamba Sanskrit Pratishthan, Varansi, 2000; 13: 1/41.
- Dr. Brahmanand Tripathi, Caraka samhita of aganivesa, hindi commentary,1ST Edition, Published by Chaukhamba Sanskrit Pratishthan, Varansi, 2000; 565: 30/26.
- Kaviraja Ambikadutta Shastri, Susrutasamhita of Maharsi susruta,hindi commentary, Published by Chaukhamba Sanskrit Pratishthan, Varansi, 2010; 20: 6/3.
- Dr. Brahmanand Tripathi, Caraka samhita of aganivesa, hindi commentary,1ST Edition, Published by Chaukhamba Sanskrit Pratishthan, Varansi, 2000; 633: 6/7.
- Dr. Brahmanand Tripathi, Caraka samhita of aganivesa, hindi commentary,1ST Edition, Published by Chaukhamba Sanskrit Pratishthan, Varansi, 2000; 141: 5/103.
- K. park, textbook of preventive and social medicine, 17th edition, Published by Banarsidas Bhanot, Jabalpur, 2009; 13(2).
- Max muller, handbook, sanskrit- english dictionary the study of sanskrit. Compiled by theodore benfey london longmans, ore en, and co., 1866; 1095.
- Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, with Ayurveda Dipika Commentary, by Chakrapanidatta, edited by Jadavji Trikamji Acharya, Chaukhamba Surbharati Prakashan, Varanasi, Reprinted 2005. Sutrasthan Chapter one, verse, 67.
- Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, with Ayurveda Dipika Commentary, by Chakrapanidatta, edited by Jadavji Trikamji Acharya, Chaukhamba Surbharati Prakashan, Varanasi, Reprinted 2005. Sutrasthan Chapter one, verse, 41: 15.
- Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, with Ayurveda Dipika Commentary, by Chakrapanidatta, edited by Jadavji Trikamji Acharya, Chaukhamba Surbharati Prakashan, Varanasi, Reprinted 2005. Sutrasthan Chapter one, verse, 54.

12. Charak Samhita of Agnivesh elaborated by Charak & Dridhabala, with Ayurveda Dipika Commentary, by Chakrapanidatta, edited by Jadavji Trikamji Acharya, Chaukhamba Surbharati Prakashan, Varanasi, Reprinted, Chikiststhana-1/2/3, 2005.
13. www.wikipedia.com/Lifestyleayurveda.
14. www.shodhaganga.com/stressayurvedalifestyle.
15. www.researchgate.com.



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Review Article

ROLE OF AAHARA AND YOGIC PRACTICES IN THE MANAGEMENT OF AMLAPITTA – REVIEW ARTICLE

Jadhav Kalpana¹, Godbole Milind², Kodag Shubhangi^{3*}

¹HOD & Associate Professor, Department of Swasthavritta, Yeshwant Ayurved , College PGT & RC, Kodoli, Kolhapur, Maharashtra, India

²Dean & Professor Yeshwant Ayurved College PGT & RC, Kodoli, Kolhapur, Maharashtra, India

³PG Scholar, Department of Swasthavritta, Yeshwant Ayurved College PGT & RC, Kodoli, Kolhapur, Maharashtra, India

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*Corresponding Author: Dr. Shubhangi Kodag

PG Scholar, Department of Swasthavritta, Yeshwant Ayurved College PGT & RC, Kodoli, Kolhapur, Maharashtra, India

Email: drshubhangi1990@gmail.com, Mobile: 9850119900

ABSTRACT

Amlapitta is the burning issue in present era, commonly occurs due to change in dietary habits, intake of spicy and oily foods, alcohol consumption, irregular sleeping habits and persistent mental stress and strain. Hurry, Worry and Curry are the three major reasons for this disease. It can be cured with simple medications but the condition may relapse by observing faulty lifestyle. For prevention and control of *Amlapitta* not only the physiological functions of the body should be in balanced state but the mental health should also be well maintained. Hence the holistic approach must be applied to take hold of this problem. This review article highlights on dietary interventions and life style modifications to prevent & cure *Amlapitta*. *Ayurveda* has given intense importance on dietary regimen. Also said to do variations according to the season (rutu), *Agni*, *Prakriti*, quantity and type of food taken for healthy person as well as in diseased person. For diseased person *pathyapatha* (do's and don'ts) in respect to ahar as well as vihar is suggested by acharyas for each disease. According to this in the management of disease like *Amlapitta*, where the *pathyapatha* regarding dietary factors and vihar regarding yoga are very much important. So Aahar and *Yogic practices* play a significant role in the prevention & management of *Amlapitta*.

Keywords: *Amlapitta*, *Ahara*, *Yogic practices*, *Shatkarma*.

INTRODUCTION

Ayurveda is working since long in the direction of WHO's recent motto of 'Health for all'. Although there is a significant advancement in the field of Modern Medicine, still the mankind is suffering from many different diseases. *Amlapitta* is one of them and is very difficult due to its Chronic, Relapsing and Remittent nature. Stressful daily routine, insufficient sleep at night, irregular meal times, eating too late at night, spicy food habits, salty and sour foods like chips, over eating of stale and fermented foods, sleeping immediately after meals, lack of rest, fast moving lifestyle, suppression of urges, worries are the key factors for disease. All the diseases are caused by *Mandagni*¹. *Agni* and *Pitta* are the main factors responsible for digestion, due to their abnormality, food is not properly digested and produces the *Ama*, which is acidic in nature. It also gives the importance as long life in the functioning state and even death in unfunctioning state of *Agni*². Person gets various symptoms including Acidic

eruption, indigestion etc. This syndrome is known as *Amlapitta*, which has been separately described as disease by *Madhavakar*. *Acharya Kashyapa* was the first to describe *Amlapitta* as disease and analyze it on *Dosha* basis, whereas *Madhavakar* further classified it according to *Gati* i.e., *Urdhvag Amlapitta* and *Adhog Amlapitta* and also on *Dosha* basis³.

Amlapitta has become one of the common problems in present era due to change in lifestyle. It is a pitta doshadushti disease of the Annavahastrotas caused due to mandagni and ama. *Amlapitta* is mentioned by laghutrayee. At around 700 A.D *Madhavakar* describes *amlapittavyadhi* separately in *Madhavnidan*. *Amlapitta* also mentioned by *Yogratnakar*, *Bhaishjyaratnavali*, *Rasaratnasamuchhaya* etc. According to *Charak Samhita* in *Grahani Adhyaya* finds similar and identical symptoms of *Amlapitta* in the purvarupa named under the term *Shuktapaka*.

AIMS AND OBJECTIVES

1. To study Ayurvedic concept of *Amlapitta*.

2. To study importance of Ahara, Vihara and Yoga Practices in Amlapitta.

Etymology

Amlapitta is a combination of two words *Amla* and *Pitta*, *Amla* means sour taste and *Pitta* means chemical substance for digestion. So in *Amlapitta* there is a pathological change in *Pitta Dosha*. *Amla* has been said a natural property of *Pitta* along with *Katu-rasa* according to *Charaka*⁴. *Sushruta* has enlisted *Katu* as its original *Rasa* and mentioned that when *Pitta* becomes *Vidagdha* then it changes in the *Amla*⁵. So, the term *Amlapitta* implies a disease or condition in which the sourness of *Pitta* gets increased.

Definitions

The *Pitta* with *Amlaguna* and *Vidagdhavastha* is called *Amlapitta*⁶.

Classification

According to Madhavanidana /Bhavprakash

Based on location of *Dosha* it is two types⁷.

1. Urdhvaga Amlapitta
2. Adhoga Amlapitta

On the basis of *Dosha Samasarga Avastha* has been classified into 4 headings⁸.

1. Vatadhika
2. VataKaphadhika
3. Kaphadhika
4. Sleshmapittaja

According to Kashyapa – 3 types⁹.

1. Vatolbana
2. Pittolbana
3. Kapholbana

Nidana of Amlapitta -

Hetu (Etiological factors) of *Amlapitta* can be classified as under:

Aharaja Hetu: *Virudha Ahara, Pitta Prakopak Anna, Dushta Ahara Guru, Abhishyandi Bhojana, Pishta Anna, Vidahi Anna Phanita, IkshuVikara, Kulattha, ApakvaMadya, Gorasa. AtiUshna, Amla, Drava Sevan, Antarodaka*¹⁰.

Viharaja Hetu: *Vegvidharan, Divaswapan, Atisnan, Avagahanand Jagran*¹¹.

Mansik Hetu: Psychology also plays a great role in the maintaining of health and psychological activities. *Acharya Charaka* gives its importance as 'Tridandavata'. *Charaka* has described the intimate relationship between soul, mind and body¹². *Acharya Sushruta* gives its importance in maintenance of Health. He mentions equilibrium of *Tridosha, Saptadhatu, Trimala*, thirteen types of *Agni* along with *Prasanna Atma, Indriya and Mana* is responsible for proper health¹³. Any abnormality of the above causes production of disease. So an abnormal psychology in terms of mental stress and strain anger, anxiety, greed etc. shows their effect upon *Agni*¹⁴.

Regional factor (Deshaprabhava): According to *Acharya Kashyapa* the disease is found more in *Anupa Desha*, as compared to other *Deshas*. As of its *Kapha* vitiating nature of *Anupadesha*¹⁵. In the line of treatment he advises *Deshantargamanam* in untreated cases¹⁶.

Purvaroopa: No specific *Purvaroopas* or premonitory symptoms of *Amlapitta* are mentioned in any of Ayurvedic classical texts.

Roopa: *Madhava Nidana* has given following symptoms of *Amlapitta* i.e., the presence of *Avipaka* (Indigestion), *Klama* (Tiredness without performing task), *Utklesha* (Nausea), *Amlodgara* (Sour Belching), *Gauravta* (Heaviness), *Hrit-KanthaDaha* (Heart burn & burning in throat) and *Aruchi* (Anoxia) should be termed as *Amlapitta*¹⁷.

Samprapti of Amlapitta: The etiological factors like *Abhojana, Atibhojana, Veganigraha, Panchakarma Vyapat* and seasonal variation etc. cause vitiation of *Doshas* and *Agni* which ultimately results *Mandagni* which is treated as mother of all the diseases. This *Mandagni* leads to *Avipaka* and due to *Avipaka* even light and small meals are not digested. This undigested and ill digested food gets *Shuktatva* which leads to the formation of *Annavisha*. This *Annavisha* is manifested in the form of *Ajirna*¹⁸.

Management of Amlapitta-

Pathyapathy according to Diet and Life style modification-
Ahara: PathyaApathya¹⁹

Sr. No.	Classes of diet	Pathya (Do's)	Apathya (Dont's)
1.	Cereals	Rice of Old <i>Shali</i> variety, <i>Yava, Wheat (Godhuma)</i>	<i>Naveen Anna</i>
2.	Pulses	<i>Mudaga</i> (Green gram), Lentil	<i>Kulatha, Urad</i>
3.	Vegetables	<i>Patola, Vastuka, Karvelak, Carrot, Mint, Spinach, Amla, Bitter gourd, Cabbage, Pumpkin</i>	Mustard leaves, fenugreek, brinjal
4.	Fruits	<i>Dadima, Kapitha, Amalaki, Kushmanda, Apple, Banana, Sweet Orange, Coconut, Mango, Dates.</i>	Jackfruit, Watermelon, Cashew Fruit, Lime, Pineapple, Plum
5.	Milk and milk products	<i>Goghrita, Godugdha, Butter milk</i>	Curd, Sour Butter milk, Paneer
6.	Sugarcane and its products	Sugar, Honey	
7.	Drinks		Liquor, <i>Kanji</i>
8.	Cooked food	Meat and Meat soup of Animals and birds	Items fried in oil
9.	Adjuvant of food	All <i>Tikta</i> Juices and Edibles	Salt, <i>Amla</i> and <i>Katu</i> juices, <i>Achara, Chatni, Khattai</i>
10.	Spices	Garlic, Dry ginger, Clove, Turmeric, Saffron, Cumin	Asafoetida, Chilli, Cinnamon, Mustard Seeds, Pepper, Tamarind
11.	Roots and Tubers	Beet root, Sweet Potato, Carrot	
12.	Nuts	Coconut	Peanut, Groundnut
13.	Oils	Sunflower, Coconut oil	Mustard oil, Sesame oil
14.	Regimen	<i>Sheet upchara, Vishram</i>	<i>Atapa Sewan, Vegadharana, Krodha, Shoka, Chinta, Adharniya Vegadharana</i> , Sleeping after meals in day time

Diet and Life style Modification -

Although the role of food in functional dyspepsia is unclear, many patients report improvement with dietary alteration. Simple dietary precautions may go a long way in alleviating symptoms. Eat meal at fixed times every day and have unhurried meals. Keep at least three hours gap between meals. Do not take large meals as they provoke gastric motor activity. Meals should be masticated properly. Not habitually sipping fluids during meals. Water should be drunk only after the meal is finished. Avoid excessive oily and spicy food, especially in the summer season. Avoid strong tea, coffee, smoking, and alcohol. Ulcerogenic drugs such as aspirin, salicylates, reserpine and adrenal steroids should not be taken. Keep healthy sleeping times. Insomnia can cause indigestion..

Yoga in Today's Life

According to medical scientists, "Yoga therapy is successful because of the balance it creates in the nervous and endocrine systems which directly influences all the other systems and organs of the body "Today, in the 21st century, Physical-mental cleansing and their strengthening are *Yoga*'s most important achievements.

I) Asanas: Pawanmuktasana, Shashankasana, Shavasana.

1. Pavanmuktasana

Benefits: This posture is useful in improving digestion and evacuation problem. This posture helps in relieving back ache and sciatica. Even helpful in diabetes.

2. Shashankasana

Benefits: It improves gastritis, indigestion, constipation. It improves diabetes, poor physique, shortness of height and poor circulation etc. Improves flexibility and strength of spine which can counter all the adverse effects of sedentary life.

3. Shavasana

Benefits: Furthermore, the physiological benefits of deep relaxation are numerous: It removes fatigue and gives rest to the mind²⁰. In *Gherend Samhita*, it has been said that this posture destroys fatigue, and quietest the agitation of the mind. It decrease heart rate and the rate of respiration, it reduces blood pressure, muscle tension, metabolic rate and the consumption of oxygen. A reduction in general anxiety and number and frequency of panic attacks. An increase in energy levels and in general productivity. An improvement in concentration and memory. An increase in focus. A decrease in fatigue, coupled with deeper and sounder sleep. Improved self confidence.

II) Pranayam

1. Anuloma –Viloma Pranayama

Benefits: It promotes the balance between the two nostrils apart from cleansing the nasal tract. It increases the vitality. It increases the digestive fire and appetite. Brings the balance in sympathetic and parasympathetic nervous systems by relaxing the sympathetic nervous system and strengthening the parasympathetic nervous system. This helps in reducing stress related indigestion by regulating stress hormones.

Therapeutic: It lowers the levels of stress and anxiety by harmonizing the *Pranas*. As stress is one of causative factor of *Amlapitta* so *Pranayam* is beneficial. It is beneficial in respiratory disorders such as Bronchial asthma, nasal allergy, bronchitis.

Spiritual: It induces tranquility, clarity of thoughts and concentration. It clears *Pranic* blockages and balance *Ida* and *Pingla Nadis* causing *Sushumnanadi* to flow, which leads to deep states of meditation and spiritual awakening. It helps to maintain *Brahmacharya*, which is pre-requisite for spiritual awakening²¹. By *Pranayama* is attained the power of levitation, by *Pranayama* disease are cured, by *Pranayama* the *Shakti* is awakened, by *Pranayama* is obtained the calmness of mind and relaxation of mental powers of bliss; verily the practitioner of *Pranayama* is happy. When this has been practiced daily, for three months, with regularity the *Nadis* of the body will readily and surely be purified²².

Precaution: Those suffering from high or low blood pressure should not do *Kumbhaka* in this *Pranayama*. However they can practice *Pooraka* and *Rechaka* slowly.

2. Kapalbhati

Benefits: It destroys disorders of *Kapha*. It is excellent not only for physical body but also for subconscious mind as well. According to Swami Ramdev Ji Maharaj it is 'Sanjeevani' one that infuses life on earth. As this process involves forceful movements of abdominal organs thus increases inter abdominal pressure which helps in increasing their function, thus removing unwanted waste from the body. *Kapal Bhati* should be performed empty stomach or 3 - 4 hours after meals. It stimulates the six chakras in body. It tones the digestive organs.

3. Sheetali

Sheetali is one of the type of *Pranayama* which helps the people who get hot flushes or suffer from acidity and can get rid of their problem by practicing it regularly.

Benefits

By the regular practice of this *Pranayama* diseases like *Gulma*, *Pliharoga*, *Pitta janyarogas*, *Trishnaroga* and *Vishjanya* diseases are completely destroyed²³.

4. Sheetkari

Benefits

The practice on proper use of this *Pranayama* will be free from increased appetite, thirst, sleep and laziness²⁴. This makes our body strong and free from all diseases. The regular practice of this *Pranayama* is called as *Yoginder*²⁵.

CONCLUSION

One should take food according to one's capacity of digestion. Appropriate quantity and quality of food consumed helps to prevent and control dyspepsia. One has to follow code of Dietetics and Yogic practices for better health. With the complaints of *Amlapitta* given do's and don'ts and *Yogic* practices help to produce soothing effect on inner layer of stomach, reverses inflammatory changes and controls the digestive secretions by which *Amlapitta* can be tackled.

REFERENCES

1. Dr. Kaviraja Atridev Gupta. *Vagbhatta Ashtang Hridayam*. Edition 2011 Varanasi Chaukhamba publication, Nidanasthana 12/1Pg.358.
2. Pt. Kashinath Sastri Jadavaji Charaka Samhita of Agnivesha with Vidyotini Hindi Commentary Edition 2006 Varanasi Chaukhamba Sanskrit Sansthana.

Charaka Gangasahaya Pandeya. Part 2 Chikitsasthna 15/3-4 Pg.376.

3. Sri Vijayarakshita and Srikanthadatta Madhava Nidana Edition 2005 Varanasi Chaukhambha Sanskrit Sansthana with Madhukosa commentary Part 2 51/41 Pg170.
4. Pt. Kashinath Sastri Jadavaji Charaka Samhita of Agnivesha with Vidyotini Hindi Commentary by editor Dr. Charaka Gangasahaya Pandeya. Edition 2006 Varanasi Part 1 Chaukhambha Sanskrit Sansthana Sutrasthna 1/60 Pg.27.
5. Kaviraja Ambikadutta Shastri Sushruta Samhita of Maharshi Susruta edited with Ayurveda tatvasandipika Part 1: Edition 2011 Varanasi Chaukhambha Sanskrit Sansthana 2011.Sutrasthna 21/11Pg.116.
6. Sri Vijayarakshita and Srikanthadatta Madhava Nidana with Madhukosa commentary Edition 2005 Varanasi Chaukhambha Sanskrit Sansthana Part 2 51/1 Pg170.
7. Sri Vijayarakshita and Srikanthadatta Madhava Nidana with Madhukosa commentary Edition 2005 Varanasi Chaukhambha Sanskrit Sansthana Part 2 51/46 Pg 170.
8. Sri Vijayarakshita and Srikanthadatta Madhava Nidana with Madhukosa commentary. Edition 2005 Varanasi Part 2 Chaukhambha Sanskrit Sansthana Part 2 51/9 Pg170.
9. Pandit Hemraj Sharma Kashyapa Samhita Edition 2010 Varanasi Chaukhambha Sanskrit Sansthana Khilsthna 16/44Pg.338.
10. Sri Vijayarakshita and Srikanthadatta Madhava Nidana with Madhukosa commentary Edition 2005 Varanasi Chaukhambha Sanskrit Sansthana Part 2 51/1 Pg170.
11. Ibid, pg.238.
12. Pt. Kashinath Sastri Jadavaji Charaka Samhita of Agnivesha with Vidyotini Hindi Commentary editor Dr. Charaka Gangasahaya Pandeya. Edition 2006 Varanasi Part 1 Chaukhambha Sanskrit Sansthana Sutrasthna 1/46Pg.18.
13. Kaviraja Ambikadutta Shastri Sushruta Samhita of Maharshi Susruta edited with Ayurveda tatvasandipika Edition 2011 Varanasi Chaukhambha Sanskrit Sansthana. Sutrasthna Part 1 21/11Pg.116.
14. Pt. Kashinath Sastri Jadavaji Charaka Samhita of Agnivesha with Vidyotini Hindi Commentary editor Dr. Charaka Gangasahaya Pandeya. Edition 2006 Varanasi Chaukhambha Sanskrit Sansthana Part 1 Vimanasthna 2/9Pg.564.
15. Pandit Hemraj Sharma Kashyapa Samhita Edition 2010 Varanasi Chaukhambha Sanskrit Sansthana Khilsthna 16/44Pg.338.
16. Ibid, 16/45 Pg.338.
17. Sri Vijayarakshita and Srikanthadatta. Madhava Nidana with Madhukosa commentary Edition 2005 Varanasi Chaukhambha Sanskrit Sansthana Part 2 51/2 Pg171.
18. Pt. Kashinath Sastri Jadavaji Charaka Samhita of Agnivesha with Vidyotini Hindi Commentary editor Dr. Charaka Gangasahaya Pandeya. Edition 2006 Varanasi Chaukhambha Sanskrit Sansthana Chikitsasthna 15/45 Pg.386.
19. Prof Dr. P H Kulkarni Ayurvedic Aahar: The scientific Diet Varanasi Chaukhambha Sanskrit Sansthana.
20. Paramhansa Swami Anant Bharti Hath Yoga Pradipika Edition 2013 Varanasi Chaukhambha Publishers Prathmupdesha/34 Pg23.
21. Dr. Raghvendra Raghva Gherend Samhita Edition 2004 Chaukhambha Surbharti Prakashan Delhi 5/56 Pg.66.
22. Paramhansa Swami Anant Bharti Hath Yoga Pradipika Edition 2013 Varanasi Chaukhambha Publishers 2/58 Pg57.
23. Paramhansa Swami Anant Bharti Hath Yoga Pradipika Edition 2013 Varanasi Chaukhambha Publishers 2/55 Pg56.
24. Paramhansa Swami Anant Bharti Hath Yoga Pradipikai Edition 2013 Varanasi Chaukhambha Publishers 2/56 Pg56.
25. Ibid, pg. 354.


CRITICAL ANALYSIS OF RASAYANA ACTIVITY OF DRAVYAS IN AYURVEDA
Dr. Sachin Laxman Upalanchiwar^{1*} and Dr. Kalpana Krishnarao Jadhav²
¹M.D. (Ayu), Ph.D. (Scholar), Department of Swasthavrutta, Yashwant Ayurvedic College & Research Centre, Kodoli, Kolhapur, Maharashtra.

²M.D. Ph.D. (Ayu), Associate Professor, HOD Department of Swasthavrutta, Yashwant Ayurvedic College & Research Centre, Kodoli, Kolhapur, Maharashtra.

***Corresponding Author: Dr. Sachin Laxman Upalanchiwar**

M.D. (Ayu), Ph.D. (Scholar), Department of Swasthavrutta, Yashwant Ayurvedic College & Research Centre, Kodoli, Kolhapur, Maharashtra.

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ABSTRACT

Rasayana therapy is a wonderful treatment procedure of *Ayurveda*. A person can live healthy and happy long life by the proper use of *Rasayana* therapy. Science of Rejuvenation deals with guidelines which enable a man to retain his youthful strength up to old age and which generally serve to make the human systems invulnerable to disease and decay. This paper enlightens the details of *Rasayana* in the light of basic theories of *Ayurveda* with thorough discussions on many informative points which are sourced from modern medical knowledge in research point of view. Classification of *Rasayana*, importance of code of conduct, contraindications of *Rasayana* therapy, potential *Rasayana* functions are discussed in detail. An attempt has been made to explain the relationship of *Rasayana* with body and natural process of ageing.

While explaining the *Rasayana* action of a drug, the role and importance of metabolic factors and its different stages of absorption, its pathways and metabolic transformations, disequilibrium and the process of waste eliminations are tried to link appropriately. Anti-ageing as one of the focal areas of *Rasayana*, the discussion on controlling the biological clock of ageing through *Rasayana* opens up new areas for research. Paper also tried to explain important concept of longevity, Immunity and *Rasayana*. This paper is an effort to understand the action of drugs and modalities which we adapt for *Rasayana* therapy. The mechanism of action of *Rasayana* drugs are explained in the terms of Antioxidant property, Immunomodulatory property, Adaptogenic activity, Cell proliferation, Tissue protection and regeneration activity, Intellect promotion and stress relieving activity, Bactericidal and antimicrobial activity along with cardio tonic effect of *Rasayana* drugs.

KEYWORDS: *Rasayana, Dhatus, Rejuvenation, Anti-ageing, Antioxidants.*
INTRODUCTION

Rasayana therapy is a wonderful treatment procedure of *Ayurveda*. A person can live healthy and happy long life by the proper use of *Rasayana* therapy. Ayurvedic physicians had developed certain dietary and therapeutic measures to delay ageing and rejuvenating whole functional dynamics of the body system. *Rasayana tantra* represents the basic approach of *Ayurveda* which comprises preventive promotive and curative aspects of health and carries the most practical methods for management of health and disease through its measures as the *Rasayana chikitsa*.^[1]

Rasayana therapy is not a simple drug therapy but is a specialized therapeutic procedure involving the fundamental concept of *Ayurveda*. This revitalization and rejuvenation are known as the '*Rasayana chikitsa*' (Rejuvenation therapy). *Rasayana* therapy of *Ayurveda* is a dedicated stream of medication for immune promotive,

antidegenerative and rejuvenative health care and is known for preventing the effects of ageing and improving the quality of life of healthy as well as diseased individuals. Science of Rejuvenation deals with guidelines which enable a man to retain his youthful strength up to old age and which generally serve to make the human systems invulnerable to disease and decay.

Describing the effects of *Rasayana*, the classical texts of *Ayurveda* say that from *Rasayana* one attains longevity, improved harmony and intelligence, freedom from disorder, youthful vigor, excellence of luster, complexion and voice, optimum strength of physique and senses, command over language, respectability and brilliance. Rejuvenation therapy has unbelievable and wonderful effects. It promotes life, maintains positive health, and preserves youth and cure sleep problems, drowsiness, physical as well as mental fatigue, laziness and weakness. It maintains proper balance amongst

tridoshas. It produces stability, cures stiffness of muscles, stimulation of muscles, stimulate digestion and metabolism. Persons desirous of attaining long life, vitality and happiness can practice rejuvenation therapy with complete devotion according to the prescribed procedures. Numerous single and compound *Rasayana* medicines possessing diversified actions like immuno-enhancement, free-radical scavenging, adaptogenic or anti-stress and nutritive effects are described in *Ayurvedic* literature for their use in health promotion and management of diseases with improvement in the quality of life.

The classification to consider treatment for ageing (*Jara chikitsa*) as synonymous with *Rasayana-chikitsa* (*Rasayana* treatment) as one of the eight branches of *Ayurveda* is not only to specialize certain methods in any particular knowledge domain of the *Ayurvedic* system but as a process by which the body tissues attain its best capacity to perform their systemic activities.^[2] The concept of *Rasayana-chikitsa* as a branch has its own importance not only in the old age but need to be commenced in the early stage.^[3] As one the eight branches of *Ayurveda*, *Rasayana-chikitsa* is applicable in all branches of *Ayurveda* irrespective of any particular domain of knowledge and it has great relevance as a procedure to attain and maintain good health.

METHODOLOGY

Information collected from various *Ayurvedic* literatures and published articles, from few review articles and cross-references were collected. Published materials on recent research reports on *Rasayana* including original articles in Pubmed, Google Scholar, Pubmed Central Databases, Dhara online database and other allied databases were studied for the review. The search was conducted using keywords like *Rasayana*, *Dhatu*, *Ayurveda*, *Rejuvenation*, *Antiaging*, *Antioxidants*, *Herbal tonics*, *Herbal supplements*, *Nootropic*, *Immunomodulatory herbs*, *Adaptogenic herbs* etc; with their corresponding Mesh terms in combination like OR, AND.

Classification of rasayana

1) According to mode of action or administration of *Rasayana*

a) *Kutipraveshika Rasayana*

In this form of *Rasayana* the person is made to stay in a specially designed chamber for a certain period and is given *Rasayana* preparations.

b) *Vatatapika Rasayana*

In this form the person can carry out his normal work and still undergo *Rasayana* therapy.

c) *Droni Praveshika Rasayana*

This is a special type of *Rasayana* administered in a very spectacular manner, where a person is made to consume stomach full of the juice of divine herbs and made to lie down unconsciously in a wooden casket for a period of six

months. Although many textual references can be found regarding this procedure as being one that will enable an old person to completely regain his youth, but this has no known history of being performed anywhere in the near past.

2) According to purpose of administration

a) *Kamya Rasayana*- These are promoter of normal health. They boast body energy levels, immunity and general health hence the *Rasayana*. These are of 3 types

- *Pranakamya*- Promoter of vitality and longevity.
- *Medhakamya*- Promoter of intelligence.
- *Srikamya*- Promoter of complexion.

b) *Naimittik Rasayana* - Means things listed for a short and specific period, used for treating disease.

c) *Aajasrika Rasayana*- Is using food substances on regular basis for nourishment of body.

3) According to mode of Action

a) *Samsodhan Rasayana* b) *Samashaman Rasayana*

4) *Aachara Rasayana*: This means how the person should behave while moving in the society.

5) According to Age

Table 1: Classification of *Rasayana* as per Specific preventive action in specific age group.

Sr. No	Age group in years	Desired Effect	Rasayana drugs
1	1-10	<i>Balya</i> (Cessation of childhood)	<i>Vacha</i> (Acorus calamus), <i>Swarna Bhasma</i> (gold calx)
2	11-20	<i>Vriddhi</i> (Growth decreases)	<i>Ashwagandha</i> (Withania somnifera), <i>Bala</i> (Sida cordifolia), <i>Kashmari</i> (Gmelina arborea)
3	21-30	<i>Chavi</i> (glow decreases)	<i>Amalaki</i> (Emblica officinalis) <i>Loha</i> (iron calx)
4	31-40	<i>Medha</i> (memory decreases)	<i>Shankhapushpi</i> (Convolvulus microphyllus), <i>Jyotishmati</i> (Celastrus paniculatus) <i>Vacha</i> (Acorus calamus), <i>Bramhi</i> (Bacopa monneri), <i>Swarna Bhasma</i> (gold calx)
5	41-50	<i>Tvak</i> (Skin lustre decreases so intended for sustaining health of skin)	<i>Bhringraja</i> (Eclipta alba), <i>Jyotishmati</i> , <i>Triphala</i> (three myrobalans), <i>Shatavari</i> , <i>Priyal</i>
6	51-60	<i>Drishti</i> (eyesight decreases, care of vision)	<i>Jyotishmati</i> (Celastrus paniculatus), <i>Triphala</i> (three myrobalans), <i>Shatavari</i> (Asparagus racemosus)
7	61-70	<i>Shukra</i> (seminal secretion decreases, libido)	<i>Atmagupta</i> (Mucuna prurita) <i>Pippali</i> (Piper longum)
8	71-80	<i>Vikrama</i> (loss of vigour and physical strength)	
9	81-90	<i>Buddhi</i> (intelligence decreases)	
10	91-100	<i>Karmedriya</i> (Locomotor power & activity decreases)	<i>Rasayana</i> may not be effective

6) According to *Deha Prakruti*

- a) **Vata Prakruti-** *Bala*, *Ashwagnagha*, *Guduchi*, *Shankhapushpi*, Ghee, Milk, Gold.
- b) **Pitta Prakruti-** *Shatavari*, *Amalaki*, *Brahmi*, *Chyavanprash*, Milk, Ghee, Silver.
- c) **Kapha Prakruti-** *Vacha*, *Bakuchi*, *Brahma Rasayan*, *Haritaki*, *Triphala*, Honey.

7) According to *Ritu Saatmya*

- a) **Adankala-** *Sitavirya* and *Laghu guna Dravya* (*Amalaki*).
- b) **Visarga Kala-** *Ushnavirya*, *Guru guna dravya* (*Bhallatak*).

Table 2: Ayurvedic *Rasayana* activities, their contemporary medical terms & established drugs.

Sr. No	Rasayana activity	Contemporary term	Indicated Rasayana Dravya
1	<i>Dheerghayu</i>	Longevity	<i>Amalaki</i> (Emblica officinalis)
2	<i>Smritivardhana</i>	Memory enhancer	<i>Mandoakaparni</i> (Centella asiatica)
3	<i>Medhya</i>	Nootropics, Mood elevators, Anti-stress	<i>Brahmi</i> (Bacopa monnieri), <i>Shankhapushpi</i> (Convolvulus microphyllus)
4	<i>Tarunyakara</i>	Youthfulness enhancer	<i>Guduchi</i> (Tinospora cordifolia), <i>Amalaki</i> (Emblica officinalis)
5	<i>Prabha varna kara</i>	Skin glow, complexion improviser	<i>Jyotishmati</i> (Celastrus paniculatus), <i>Yashtimadhu</i> (Glycyrrhiza glabra)
6	<i>Swarya</i>	Quality of voice improver	<i>Vacha</i> (Acorus calamus), <i>Yashtimadhu</i> (Glycyrrhiza glabra)
7	<i>Dehendriyabala</i> , <i>Swastha oorjaskara</i> , <i>Arogya vardhana</i>	Nervine tonic, Immuno-modulator, Antioxidant, Adoptogenic, Cytoprotective	<i>Guduchi</i> (Tinospora cordifolia), <i>Ashwaganda</i> (Withania somnifera), <i>Amalaki</i> (Emblica officinalis)
8	<i>Balya</i>	Strength promoters	<i>Bala</i> (Sida cordifolia)
9	<i>Jeevaneeya</i>	General tonic	<i>Jeevanti</i> (Leptadenia reticulata), <i>Yashtimadhu</i> (Glycyrrhiza glabra)
10	<i>Bramhaneeya</i>	Anabolic, Tissue regenerative	<i>Shatavari</i> (Asparagus racemosus)
11	<i>Vayasthapana</i>	Anti-aging	<i>Amalaki</i> (Emblica officinalis)
12	<i>Vrushya</i>	Aphrodisiac	<i>Ashwagandha</i> (Withania somnifera), <i>Kapikacchu</i> (Mucuna prurita)
13	<i>Kanti vardhana</i>	Excellence of luster	<i>Bhringaraja</i> (Eclipta alba), <i>Jyotishmati</i> (Celastrus paniculatus)

Table 3: Dhatus (body tissue) specific promotive Rasayana.

Sr. No	Dhatus	Rasayana
1	Rasa	<i>Draksha</i> (<i>Vitis vinifera</i>), <i>Shatavari</i> (<i>Asparagus racemosus</i>), <i>Kashmari</i> (<i>Gmelina arborea</i>), <i>Ksheer</i> (milk)
2	Rakta	<i>Amalaki</i> (<i>Emblica officinalis</i>), <i>Bhringaraja</i> (<i>Eclipta alba</i>), <i>Svarnamakshika Bhasma</i> (copper pyrite)
3	Mansa	<i>Ashwagandha</i> (<i>Withania somnifera</i>), <i>Bala</i> (<i>Sida cordifolia</i>), <i>Rajat Bhasma</i> (silver calx)
4	Meda	<i>Guggulu</i> (<i>Commiphora wightii</i>), <i>Shilajit</i> (<i>Asphaltum punjabinum</i>), <i>Haritaki</i> (<i>Terminalia chebula</i>), <i>Guduchi</i> (<i>Tinospora cordifolia</i>)
5	Asthi	<i>Vanshalochana</i> (Bamboo silica)
6	Majja	<i>Shankhapushpi</i> (<i>Convolvulus microphyllus</i>), <i>Loha Bhasma</i> (iron calx), <i>Swarna Bhasma</i> (gold calx)
7	Shukra	<i>Kapikacchu</i> (<i>Mucuna pruriens</i>), <i>Vidarikanda</i> (<i>Pueraria tuberosa</i>), <i>Shatavari</i> (<i>Asparagus racemosus</i>), <i>Ashwagandha</i> (<i>Withania somnifera</i>), <i>Swarna Bhasma</i> (gold calx)

Table 4: Rasayana for specific Prakriti.

Sr.No	Prakriti	Single drug
1	<i>Vata</i>	<i>Taila</i> (Sesame oil), <i>Bala</i> (<i>Sida cordifolia</i>), <i>Ashwagandha</i> (<i>Withania somnifera</i>)
2	<i>Pitta</i>	<i>Goghrita</i> (Cow ghee), <i>Goksheera</i> (Cow milk), <i>Shatavari</i> (<i>Asparagus racemosus</i>), <i>Amalaki</i> (<i>Emblica officinalis</i>), <i>Guduchi</i> (<i>Tinospora cordifolia</i>)
3	<i>Kapha</i>	<i>Madhu</i> (Honey), <i>Bhallataka</i> (<i>Semecarpus anacardium</i>), <i>Guggulu</i> (<i>Commiphora wightii</i>), <i>Pippali</i> (<i>Piper longum</i>)

Table 5: Rasayana as per therapeutic requirement.

Sr.No	Therapeutic requirement	Indicated Rasayana
1	<i>Agni Vardhaka</i> (Strengthening digestive fire)	<i>Pippali</i> (<i>Piper longum</i>), <i>Chitraka</i> (<i>Plumbago zeylanica</i>), <i>Vidanga</i> (<i>Embelia ribes</i>)
2	<i>Srothas Shodhana</i> (Cleansing channels)	<i>Pippali</i> (<i>Piper longum</i>), <i>Guggulu</i> (<i>Commiphora wightii</i>), <i>Bhallathaka</i> (<i>Semecarpus anacardium</i>), <i>Kasturi</i> (Musk)
3	<i>Rasa Dhatus Vardhaka</i> (Increasing lymph)	<i>Kshira</i> (Milk), <i>Draksha</i> (<i>Vitis vinifera</i>), <i>Kashmari</i> (<i>Gmelina arborea</i>)

Table 6: Rasayana as per seasons and place.

Sr. No	Ritu-Kala (Seasons)	Rasayana drugs
1	<i>Adana Kala</i> (Exhausting i.e. February-July)	<i>Shita Virya</i> and <i>Laghu Guna</i> (<i>Amalaki</i>)
2	<i>Visarga Kala</i> (Replenishing i.e. August-January)	<i>Ushna Virya</i> and <i>Laghu Guna</i> (<i>Pippali</i> , <i>Bhallataka</i>)
Desh (place)		Rasayana drugs
1	<i>Sadharana</i> (General)	<i>Guduchi</i> (<i>Tinospora cordifolia</i>)
2	<i>Jangala</i> (Arid)	<i>Ashwagandha</i> (<i>Withania somnifera</i>)
3	<i>Anupa</i> (Wet)	<i>Pippali</i> (<i>Piper longum</i>)

Table 7: Organ - System specific curative *Rasayana*.

Sr.No	Organ or System	Single drug as <i>Rasayana</i>	Compound formulation
1	Brain	<i>Brahmi</i> (Bacopa monnieri), <i>Mandookaparni</i> (Centella asiatica), <i>Guduchi</i> (Tinospora cordifolia), <i>Yashtimadhu</i> (Glycyrrhiza glabra), <i>Shankapushpi</i> (Convolvulus microphyllus)	<i>Kushmanda Rasayana, Medhya Rasayana</i>
2	Heart	<i>Arjuna</i> (Terminalia arjuna), <i>Shalaparni</i> (Desmodium gangeticum), <i>Pushkaramoola</i> (Inula racemosa), <i>Guggulu</i> (Commiphora wightii)	<i>Arjuna ksheerapaka Chandraprabhavati</i>
3	Lungs	<i>Bharangi</i> (Clerodendrum serratum), <i>Vasa</i> (Adhatoda zeylanica), <i>Rasona</i> (Allium sativum)	<i>Agastya Rasayana, Chyavana prasha</i>
4	Liver and spleen	<i>Katuki</i> (Picrorhiza kurroa), <i>Pippali</i> (Piper longum), <i>Bhringaraja</i> (Eclipta alba)	<i>Loha Rasayana</i>
5	Skin	<i>Tuvaraka</i> (Hydnocarpus laurifolia), <i>Chandana</i> (Santalum album), <i>Haridra</i> (Curcuma longa), <i>Manjistha</i> (Rubia cordifolia)	<i>Gandhaka Rasayana, Triphala Rasayana</i>
6	Eye	<i>Amalaki</i> (Emblica officinalis), <i>Yashtimadhu</i> (Glycyrrhiza glabra), <i>Triphala</i> (three myrobalans)	<i>Triphala Ghrita, Jeevanyadi Ghrita, Amalaki Rasayana</i>
7	Ear	<i>Sariva</i> (Hemidesmus indicus)	<i>Karma purana with Sarshapa and Tila taila</i>
8	Nose	-	<i>Anu taila PratimarshaNasya</i>
9	Female reproductive system	<i>Shatavari</i> (Asparagus racemosus), <i>Ashoka</i> (Saraca asoka), <i>Kumari</i> (Aloe vera)	<i>Phala ghrita</i>
10	Male reproductive system	<i>Ashwagandha</i> (Withania somnifera), <i>Kapikacchu</i> (Mucuna pruriata), <i>Gokshura</i> (Tribulus terrestris)	<i>Ashwagandha Rasayana</i>
11	GIT	<i>Pippali</i> (Piper longum), <i>Haritaki</i> (Terminalia chebula)	<i>Pippali Vardhamana Rasayana, Bhallataka Rasayana</i>
12	Urinary system	<i>Gokshura</i> (Tribulus terrestris), <i>Punarnava</i> (Boerhaavia diffusa)	<i>Chandraprabha vati</i>
13	Nervous system	<i>Rasona</i> (Allium sativum), <i>Guggulu</i> (Commiphora wightii), <i>Bala</i> (Sida cordifolia), <i>Nagabala</i> (Grewia hirsuta)	<i>Bruhat vata chintamani</i>
14	Endocrine system	<i>Shilajat</i> (Asphaltum punjabinum), <i>Amalaki</i> (Emblica officinalis), <i>Haridra</i> (Curcuma longa), <i>Guggulu</i> (Commiphora wightii), <i>Haritaki</i> (Terminalia chebula)	<i>Shilajatu Rasayana</i>

Table 8: Rasayana as per source of drugs.

Sr. No	Herbal origin	Herbo-mineral origin	Mineral origin
1	<i>Guduchi</i> (Tinospora cordifolia), <i>Mandoakaparni</i> (Centella asiatica), <i>Shankapushpi</i> (Convolvulus microphyllus), <i>Haritaki</i> (Terminalia chebula), <i>Amalaki</i> (Emblica officinalis)	<i>Chandraprabha</i> <i>Brahma Rasayana</i>	<i>Swarna</i> , <i>Shilajatu</i> , <i>Abhraka</i> (<i>Satva</i>), <i>Swarna makshika</i> , <i>Gandhaka</i> , <i>Lauha</i> , <i>Hiraka</i>

Table 9: Rasayana as per their reported biological activities.

Sr. No	Reported activity	Mechanism of action	Indicated Rasayana
1	Free Radical Scavenging / antioxidant activities	Enzymes such as superoxide dismutase, glutathione peroxidase, glutathione reductase, and catalase have been used to assess the antioxidant action	<i>Ashwagandha</i> (<i>Withania somnifera</i>), <i>Aamalaki</i> (<i>Phyllanthus embelica</i>) <i>Durva</i> (<i>Cynodon dactylon</i>)
2	Immunomodulatory activity	Humoral as well as cellular mechanisms, regulators of the immune system, such as cytokines, percentage neutrophil adhesion, phagocytic activity, and Th1/Th2	<i>Akarkara</i> (<i>Anacyclus pyrethrum</i>), <i>Shatavari</i> (<i>Asparagus racemosus</i>), <i>Ashwagandha</i> (<i>Withania Somnifera</i>), <i>Shweta Musali</i> (<i>Chlorophytum borivilianum</i>), <i>Brahma Rasayana</i> , <i>Aswagandha Rasayana</i>
3	Maintenance of Central Nervous System Function	Nootropic, Cognition enhancer, anti-amnesic, anti-depressant, neuroprotective, acetylcholinesterase inhibition	<i>Sankhupuspi</i> (<i>Convolvulus pluricaulis</i>) <i>Ashwagandha</i> (<i>Withania somnifera</i>), <i>Brahmi</i> (<i>Bacopa monnieri</i> Linn), <i>Mandukaparni</i> (<i>Centella asiatica</i> Linn), <i>Brahma Rasayana</i>
4	Radio-protective Effect	Free radicals scavenging, repairing of radiation injury, reduction of serum and liver lipid peroxides, ameliorate the oxidative damage	<i>Guduchi</i> (<i>Tinospora Cordifolia</i>), <i>Triphala</i> , <i>Brahma Rasayana</i>
5	Aphrodisiac activity	Testosterone-like effects, anabolic, anti-stress, tonic, revitalizing, rejuvenating	<i>Akarkara</i> (<i>Anacyclus pyrethrum</i>), <i>Shatavari</i> (<i>Asparagus racemosus</i>), <i>Shweta Musali</i> (<i>Chlorophytum borivilianum</i>), <i>Talmuli</i> (<i>Curculigo orchioides</i>), <i>Ashwagandha</i> (<i>Withania Somnifera</i>),
6	Anti-ulcer activity	Gastroduodenal lining protective, strengthening mucosal defence, increases mucin secretion, decreases cell shedding, anti-stress	<i>Shatavari</i> (<i>Asparagus racemosus</i>), <i>Brahmi</i> (<i>Bacopa monnieri</i> Linn), <i>Mandukaparni</i> (<i>Centella asiatica</i> Linn), <i>Yashtimadhu</i> (<i>Glycrrhiza glabra</i>), <i>Sankhupuspi</i> (<i>Convolvulus pluricaulis</i>)
7	Anti-giardial activity	Increased macrophage migration index (MMI) and phagocytic activity	<i>Pippali rasayana</i> - (prepared from <i>Pippali</i> (<i>Piper longum</i>) and <i>Palash</i> (<i>Butea monosperma</i>))
8	Anti-cancer Property	Antimetastatic, immune stimulating, activate macrophages, antibody - dependent complement-mediated tumour cell lysis, natural killer cell activity, cytoprotective	<i>Ashwagandha</i> (<i>Withania Somnifera</i>), <i>Guduchi</i> (<i>Tinospora Cordifolia</i>), <i>Aamalaki</i> (<i>Emblica officinalis</i>), <i>Brahma Rasayana</i> , <i>Aswagandha Rasayana</i> , <i>Narasimha Rasayana</i> , <i>Amritaprasna</i> and <i>Chyavanaprasha</i>

RESULT AND DISCUSSION

Mechanism of action of *Rasayana*-

Rasayana promotes nutrition by direct enrichment of the nutritional quality of rasa means nutritional blood, by promoting nutrition through improving *agni* means digestion, metabolism and by promoting the competence of *srotas* means microcirculatory channels in body.^[4] It has been reported that the 'Rasayanas' are rejuvenators, nutritional supplements and possess strong antioxidant activity. They also have antagonistic actions on the oxidative stressors, which give rise to the formation of different free radicals. They are used mainly in ageing, atherosclerosis, cancer, diabetes, rheumatoid arthritis, autoimmune and Parkinson's disease. Their anti-stress actions have made them therapeutically more important.^[5]

In order to investigate mechanism of action of the *Rasayana* i.e. *Tinospora cordifolia* studies are carried out on the proliferative fraction of the bone marrow of mice by flow cytometry and found that compared with normal mice, there was a significant increase in the proliferative fraction in the bone marrow in mice treated with the *Tinospora cordifolia*. Some *Rasayana* activate mononuclear cells to produce cytokines like GM-CSF and IL-1 in a dose dependent manner. These results indicate it is possible that the *Rasayana* (particularly those with *madhur vipaka* that are advocated as adaptogens in Ayurveda) primarily activate immune cells, leading to secretion of cytokines, which in turn act on multiple target organs to produce the innumerable effects

ascribed to these treatments.^[6]

Administration of herbal preparation, *rasayana* has been found to enhance the natural killer cell activity in normal as well as in tumor bearing animals. *Brahma rasayana* is found highly active. *Brahma rasayana* and *Aswagandha rasayana* were found to activate antibody dependent cytotoxicity significantly. *Aswagandha rasayana* also found to activate macrophages. *Rasayana* are also found to stimulate antibody dependent complement mediated tumour cell lysis.^[7]

The *Rasayana* herbs seem to exert their effect through immunosuppressant, immunostimulant and immunoadjuvant activities or by affecting the effector arm of the immune response. It has been found that the nervous, endocrine and immune systems are all interrelated. Immune products like various cytokines have been found to stimulate the hypothalamus-pituitary-adrenal axis and corticotrophin release factor (CRF), which ultimately enhances the production of adrenal corticotrophic hormone (ACTH) resulting into increased secretion of glucocorticoids which have an overall suppressive effect on the immune system.

Stress also acts on the same axis and brings about changes in the immune status of the body. These *rasayana* drugs probably reduce stress levels by affecting antioxidant levels. So, these *rasayana* drugs act as potent antioxidants and neuroendocrine immunomodulators.^[8]

Table 10: The list of contemporary terminologies used to study *Rasayana* drugs.

1	Antioxidant Action	6	Cell Proliferation & Regeneration
2	Immunomodulatory Action	7	Tissue Protection & Regeneration
3	Improving Immune Status	8	Intellect promotion (<i>Medhya</i>) & Stress relieving
4	Antiaging Action	9	Bactericidal & Anti-microbial
5	Adaptogen Activity	10	Cardio Tonic effect

Antioxidant Action

Rasayana drugs acts as Antioxidants. Antioxidants are substances that reduce oxidative damage such as that caused by free radicals. Free radicals are highly reactive chemicals that attack molecules by capturing the electrons and thus modifying chemical structures. Well known Antioxidants include a number of enzymes and other substances such as vitamin C, Vitamin E and beta carotene (which is converted to vitamin A) that are capable of counteracting the damaging effect of oxidation. Antioxidants are also commonly added to food products like vegetable oils and prepared foods.

Researches show that Antioxidants are useful for protection of heart disease. This is because oxidation plays a big role in formation atherosclerotic plaque which is a main pathological event in coronary heart disease. So, there is significant role of antioxidant in coronary heart disease. Antioxidants are having role in preventing diabetes mellitus also.

Antioxidant rich diet may prevent Diabetes. Taking Antioxidants rich food especially vitamin E, may lower risk of Type II DM. A new study shows that people whose diets had the highest levels vitamin E were 30% less likely to develop type II DM. In addition, researchers found that people who ate a lot of carotenoids, a type of antioxidant found in colourful fruits and vegetables, also had a lower risk of developing type II DM. Oxidative damage to cells is also important phenomenon in aging process. So, Antioxidants are also helpful in delaying aging. Antioxidants may possibly reduce the risk of cancer and age-related macular degeneration.

Plants have inbuilt mechanism to degenerate such oxidants. Several Ayurvedic herbs have been identified with antioxidant effect in the current review. Many *Rasayana* drugs like *Aamalaki*, *Ashwagandha* acts are Antioxidants. Main constituents of *Aamalaki* are vitamin C, carotene, and riboflavin. It is having a role in cellular oxidation reduction. They have also a role in collagen

fibrin synthesis, helps in formation at fibrin and absorption of iron. Withanolide in *Ashwagandha* also acts as Antioxidants by increasing levels of three natural Antioxidants like super oxide- dismutase, Catalase, Glutathione peroxidase. In a clinical study of 3 months duration *Guduchi* (*Tinospora cordifolia*) and *Asvagandha* (*Withania somnifera*) were found as antioxidants. *Guduchi* was found to be more effective natural antioxidant over others.^[9]

Brahmi (*Bacopa monniera*) known *Ayurvedic* drug for memory enhancing and for sedation also exhibited anti-lipid peroxidative property. For the first time the effect of alcohol and hexane fractions of Brahmi have been studied on lipid peroxidation induced by FeSO₄ and cumene hydroperoxide. Alcohol fraction showed greater protection with both inducers. Results were compared with known antioxidants tris, EDTA and a natural antioxidant vitamin E was also examined on hepatic glutathione content. *Brahmi* is found more potent antioxidant on comparison with other antioxidants used in the study. The mechanism of action could be through metal chelating at the initiation level and also as chain breaker. The authors of the work opined that *Brahmi* might serve as a medicine of aging and several nervous disorders because free radicals are involved in these pathologies.^[10]

1. Immunomodulatory Action

Immunity is accepted as *deha balam* (*vyadhiksamatva shakti*). However, immunity is complex biochemical and neuro-humoral activity still to understand completely. Several *rasayana* drugs are proved to influencing immunology schedules in the human body. *Rasayana* drugs also acts as immunomodulator. An immunomodulator is a drug used for its effect on the immune system. Clinical problems that require an evaluation of immunity include chronic infections, recurrent infection, unusual infecting agents and certain autoimmune syndromes. The type of clinical syndrome under evaluation can provide information regarding possible immune defects.

Certain *Rasayana* drugs at as Immunomodulator, strengthening of immunity is done in various ways – by promoting bodily defence mechanisms like increasing the WBC count, improving immune function. Bodily defence mechanism is promoted. Certain *Rasayana* drugs also increase number of immune cells known as T cells & B cells helping to fight infections.

A compound comprising *Punarnava* (*Boerhavia diffusa*), *Guduchi* (*Tinospora cordifolia*), *Daruharidra* (*Berberis aristata*), *Haritaki* (*Terminalia chebula*) and *Ardraka* (*Zingiber officinale*) had a maximum cure rate of 73 percent at a dose of 800 mg/kg/day in hepatic amoebiasis reducing the average degree of infection to 1.3 as compared to 4.2 for same- treated controls. In immunomodulation studies, humoral immunity was enhanced as evidenced by the haemagglutination titer. The T-cell

counts remained unaffected in the animals treated with the formulation but cell-mediated immune response was stimulated as observed in the leukocyte migration inhibition (LMI) tests.^[11]

In another study conducted at Amala Cancer Research institute, Kerala, India it is confirmed that the *Rasayanas* as immuno-modulators. Administration of *Brahma rasayana*, *Amrita prasa rasayana* and *Narsimha rasayana* were found to enhance the proliferation of lymphocytes in response to mitogens. Some were found to induce the proliferation of bone marrow cells in culture. Natural killer cell activity was also found enhanced in both normal and tumour bearing animals treated with *Rasayana*.^[12]

2. Improving Immune Status

Pippali Rasayana was tried in 41 patients of Giardiasis. It has significantly reduced the clinical signs and symptoms. Stool became free of parasites and in haematological profile, Hb percentage increased and eosinophil count decreased. No side effects were observed. It is hypothesized that the drug possibly acts through some cidal constituents present in it and also by improving immune status of patient.^[13]

It is pointed in an extensive review on cancer treatment by *Ayurvedic* drugs it is visualized that the *Ayurvedic* drugs may act anti-cancerous by improving immunological status of the recipient and by rendering protection from side effects of radiation and chemotherapy. Turmeric (*Haridra*), *Emblica officinalis* (*Aamalaki*), *Phyllanthus amarus* (*Bhumyamalaki*) and *Picrorhiza kurroa* (*Katuki*) were found to inhibit skin carcinogenesis and hepato-carcinogenesis induced by NDEA (N-Nitroso diethyl amine – a carcinogenic and mutagenic organic compound, classified as a nitrosamine). *Rasayanas* were found immuno-stimulants and could produce bone marrow proliferation and differentiation. *Rasayana* was found useful in the patients undergoing chemotherapy and radiation therapy. Polyphenols from plants are anti- metastatic compounds.^[14]

A volatile fraction from Neem oil (*Nimba Taila*) named as NIM-76 on i.p. injection caused an increase in polymorpho-nuclear leukocytes with a concomitant decrease in lymphocyte counts. This immuno-modulatory action was due to an enhanced macrophage activity and lymphocyte proliferation response, while the humoral component of immunity was unaffected.^[15]

3. Antiaging Action

Aging is progressive change related to passage of time. By the age 50-60 years of life age related changes begin to reflect like reduced power of muscle, reduced vision, memory and locomotion function, there is gradual decline in homeostasis and immune function predisposes them to infection, digestive problem and malignancy. Free radicals cause oxidative damage to various biological

molecules e.g. hydroxyl radicals can damage cell membrane and lipoproteins by a process called lipid peroxidation which may contribute to aging process. Certain *Rasayana* drugs like *Ashwagandha* inhibits copper induced lipid peroxidation and also inhibits oxidative protein modification. *Rasayana* also acts as Antioxidants so they help in delaying Aging.

4. Adaptogen Activity

Rasayana of Ayurveda can be considered as adaptogenic drugs. They increase endurance and sustaining capacity in individuals by promoting *deha bala*. A number of medicinal plants have been used in Indian system of Medicine as adaptogens, but due to lack of scientific evaluation, both experimental and clinical, these drugs have not achieved due recognition.

Satavari root (*Asparagus racemosus*), *Haritaki* (*Terminalia chebula*) and *Aamalaki* fruits extract (*Emblica officinalis*) and their fraction was evaluated for positive endurance promoting properties in a new model. Cold-hypoxia-restraint rat model was modified and developed to evaluate improvement in physical work performance and endurance in adverse stressful environment, which is an essential characteristic of adaptogen endurance to a stressful condition. The results were compared with *Panax ginseng* (50 mg/kg, p.o. x 5 days) as control. Crude extract of all the three plants studied in a dose of 200 mg/kg. p.o. for 5 days showed significant ($p<0.001$) adaptogen activity (35-80%) in all the parameters.^[16]

Encouraging results are found in one experimental model developed with albino rats to study the adaptogenic effect of herbal compound, and *Asvagandha*. The same drugs are given to 200 soldiers, who had spent one year at higher altitudes (3000 - 6000 M ht.). It is observed that psycho-physiological performance, physical performance and sensitive indices of oxygen availability to the tissues were improved by the intake of these drugs up to a period of three months stay in high mountains (4800 - 6000 metres). As these adaptogens intake provided protection from high altitude stress they have been suggested as health food supplements. These studies are also indicated that *Ayurvedic* herbal preparations viz. *Rasayana* and *Vajikarana* drugs as the preparation of real value.^[17]

The results of another study have suggested that the continued employment of *Tulasi* (*Ocimum sanctum*) can cause the restoration of the humoral response in immunosuppressive state thereby making them protective from infections.^[18]

5. Cell Proliferation & Regeneration:

A study was performed to assess the immuno-potentiating capabilities of *Asvagandha* (*Withania somnifera*) to avoid the immunosuppression produced during radiation treatment in mice. Administration of a 75% methanolic extract of the *Asvagandha* plant was found to significantly increase the total WBC count in

normal Balbic mice and reduce the leucopenia induced by sub lethal dose of gamma radiation. Treatment with *Asvagandha* was found to increase the bone marrow cellularity significantly. It had normalized the ratio of normochromatic erythrocytes and polychromatic erythrocytes in mice after the radiation exposure. Major activity of *Asvagandha* seemed to be in the stimulation of stem cell proliferation.^[19]

6. Tissue Protection & Regeneration:

Several epidemiological studies have suggested that dairy products (*Kshira varga*) intake is associated with a decreased incidence of colon cancer. In one extensive study conducted on healthy human volunteers to study the effect of milk products it is concluded that a shift from a dairy product-rich to a dairy product -free diet resulted in a significant effect on an accepted risk marker for colon cancer. The protective mechanism of dairy products is found to beat the level of tumor promotion rather than initiation.^[20]

7. Intellect promotion (*Medhya*) & Stress relieving

Acara Rasayanas visualize the code of conduct to lead stress free life in turn fetches longevity. However, the herbs that are proved to reduce the stress are also of paramount importance.

In *Ayurveda*, many drugs have been mentioned to improve the *Medha*, e.g., *Asvagandha*, *Brahmi*, *Shankapushpi*, *Jatamansi*, *Bala*, *Jyotishmati*, and *Guduchi*, etc. These drugs have also been mentioned as *Rasayana* (rejuvenative and restorative). The beneficial effects of these drugs for the treatment of psychological and psychosomatic disorders suggest that they might be having sedative and tranquilizing properties. Recent studies and researches done so far also suggests that *Medhya* drugs as mentioned in *Ayurvedic* texts, keep the mind calm and cool, reduce anxiety and apprehension thus producing sedation and tranquillity.^[21]

Sankhapushpi (*Convolvulus pluricaulis*) is an age-old remedy for different mental ailments. *Caraka* said it as the intellect promoter. It is an important ingredient in different formulations like *Brahma Rasayana*, *Agastya Haritaki* etc. The whole plant is medicinal and even in fairly high doses, the drug is found to be non-toxic. It is found effective in reducing different types of stress. In one study, 89 school going children kept on this drug for 1 year and proved that it enhanced the mental agility of the children.^[22]

The efficacy of *Asvagandha* (*Withania somnifera*) (tablets 0.5 gm, 1-2 tab. b.d.) and *Satavari ghritam* (*Asparagus racemosus*) (1-2 tsp. b. d.) as internal medication and *Lakshadi thailam* as external massage are used to enhance the non-specific general immunity of 50 preschool children. The study indicated that the non-specific immunity of children is greatly enhanced as reflected in increased haemoglobin content, and decreased episodes of pyrexia of unknown origin,

infectious disease and eye infections.^[23]

8. Bactericidal & Anti-microbial:

Several *Rasayana* drugs have been found with anti-microbial activity. The ultimate purpose of *Rasayana* drugs is also achieved by their bactericidal and anti-microbial activities. Here the action is to be presumed to indirect. By the virtue of promoting immunity the drugs might have contained microbes.

The study showed that both aqueous and organic extracts of *Valli Kantakarika* (*Solanum trilobatum*), *Asvagandha* (*Withania somnifera*), *Dugdhika Bh.* (*Euphorbia pilulifera*), *Nimba* (*Azadirachta indica*), *Aamalaki* (*Emblica officinalis*), *Tulasi* (*Ocimum sanctum*), *Lasuna* (*Allium sativum*) and *Vasa* (*Adhatoda vasica*) have bactericidal activity against Mycobacterial tuberculosis in vitro.^[24]

The study of Anti-bacterial activity of *Rasakarpura* (Mercuric chloride) a known *rasayana* of mercurial origin revealed the safety margin and efficacy against different bacterial strains.^[25] The anti-diphtherial properties of *Bhallatakasava* And *Suksma Triphala* possessing Known *rasayana* drugs like *haritaki*, *aamalaki* and *Bhallataka* were found to have bactericidal activity on diphtheria causing microorganism *Corynebacterium diphtheriae*.^[26]

Alcoholic extract of *Bhallataka* (*Semecarpus anacardium*) dry nuts showed bactericidal activity in three-gram negative strains e.g. *Escherichia coli*, *Salmonella typhi* and *Proteus vulgaris* and two-gram positive bacteria, namely *Staphylococcus aureus* and *Corynebacterium diphtheriae*. Alcoholic extract of different parts of the plant showed antibacterial property against *Corynebacterium diphtheriae*. Alcoholic leaf extract showed bactericidal activity against all the five tested strains.^[27]

9. Cardio Tonic effect

Makaradvaja a popular Ayurvedic *rasayana* is given to the rabbits orally for a period of two weeks. It has resulted in increase in ventricular contraction force evident of cardio tonic effect.^[28]

Mechanism of action *Rasayana* at cell level

Ghosal has studied comparatively and suggested possible mode of action on *Ayurvedic* herbo-mineral vitalizers (*Rasayanas*) is worth mentioning. The herbal (Polyphecnolic / humic) ingredients, by complexation with the ions of transitional metals (Fe, Cu, Mn) and those of fixed valency states become thermo stable and water-soluble. These assemblies become readily available to living cells as sources of micronutrients and of energy. The herbal ingredients in the assemblies also act as reductants and backing pumps for regeneration of the metal ions into their lower valency states. The total assembly acts as biocatalyst, for biological energy conservation and for signal transduction.^[29]

CONCLUSION

The *Rasayana* term by definition, give sharp memory, intellect and longevity, and along with freedom from illness, also restore youth. Also found in a series of experiments that the *Rasayana* plants are immunostimulant in nature^[30]. The present paper analyses various types and mode of action of *Rasayana* to support the above concept, its role as a prophylactic medication and significance in the prevention of diseases in both healthy as well as diseased individuals. Scientific studies have proven their preventive, curative and promotive aspects of health.

Querying in available literature reveals that several newer physio-pharmacological terminologies are used to explain the *Rasayana* effect of the drugs. Irrespective of language these studies provide us a greater understanding and clarity about *Rasayana* drugs. It is now we had recognized *Rasayana* effect through these terminologies like Antioxidant, Improving Immune Status, Adaptogen activity, Tissue Protection & Regeneration, Intellect promotion, Stress relieving, Cell Proliferation & Regeneration, Bactericidal & Anti-microbial Activity and Cardio-tonic effect. Immunomodulation is another important tool for *Ayurveda* doctors. One has to promote immunity potentials of an individual in any given condition to obtain better results. It is now evident adding one suitable *Rasayana* drug along with the treatment provides better results.

REFERENCES

1. Sharma PV *Susruta Samhita* of Acharya Susruta, Haridas Ayurveda series-9, Chaukambha, Visvabharati publications, Sutra sthana Varanasi, 2001.
2. Murthy, Srikantha KR *Ashtanga Samgraha* of Acharya Vaghbata, Chaukambha orientalia: Sutra sthana, Varanasi, 1997.
3. Murthy, Srikantha KR *Ashtanga hridaya* of Acharya Vaghbata, Chaukhabha Krishnadas Academy, Uttara sthana Varanasi, 2003.
4. K. K. Panday, *Comprehensive human physiology*, 1st Edition, Karshnadas Academy, Varanasi, 2000; 155-184.
5. U. Tatiya, K. V. Shastri, and S. J. Surana. Preparation and Standardization of Polyherbal *Rasayana* by Fermentation Process. *Phcog Mag*, 2008; 4(Suppl 15): S 100.
6. U. Thatte and S. Dahanukar. Evidence Based Ayurveda. *Qua. Med. Rev*, 2002; 53(4): 3-12.
7. V.P.Kumar, R.Kuttan and G.Kuttan. Effect of *Rasayana* A herbal drug preparation on cell- mediate immune response in tumour bearing mice. *Indian J Exp. Bio*, 1999; 37(1): 31-37.
8. P.Bansal, R.Sannd, N.Srikanth and G. S. Lavekar. Effect of traditionally designed nutraceutical on stress induced immunoglobulin changes at Antarctica. *African Journal of Biochemistry Research*, 2009; 3(4): 84-88.
9. De. R.K.; Tripathi, P.C., Role of Certain Indigenous

Drugs Antioxidants In Ageing, International Seminar on Free Radicals Mediated Diseases & Ayurveda, Faculty of Ayurveda, -IMS, BHU, Varanasi, 1996; 2-4.

10. Yamini B Tripathi, Savita Chourasia, Ekta Tripathi, Anil Upadhyay & G P Dubey, Bacopa Monniera Linn. As an Antioxidant: Mechanism of Action, Indian Journal of Experimental Biology, 1996; 34: 523-526.
11. Sohni, Y.R.; Bhatt, R.M., Activity of A Crude Extract Formulation in Experimental Hepatic Amoebiasis And in Immunomodulation Studies, Journal of Ethnopharmacology, 1996; 54(2, 3): 119-124.
12. Pradeep Kumar Prajapati, Damodar Joshi, Govind Prasad Dube, An Experimental Study on Makaradhwaja. Ancient Science of Life, 1997; 302-306.
13. Abbas, S.S.; Tripathi, D.M.; Agarwal, A.K.; Singh, N.; Pandey, K.C., A Double-Blind Placebo Controlled Clinical Trial of *Pippalli Rasayana* (An Ayurvedic Herbal Preparation) In Cases of Giardiasis, Antiseptic, 1997; 94(8): 250-254.
14. Ramadasan Kuttan, Contribution of Ayurveda To the Therapy of Cancer, Update Ayurveda '98, Mumbai, India, 1998; 1: 11-14.
15. Sai Ram; Sharma, S.K.; Ilavazhagan, G.; Devendra Kumar; Selvamurthy, W., Immunomodulatory Effects of Nim-76 A Volatile Fraction from Neem Oil, Journal of Ethnopharmacology, 1997; 55(2): 133-139.
16. Shukla, R; Prajapati, V; Anand, R; Patnaik, G.K. & Dhawan, B.N., Effective Rat Model for The Evaluation of Adaptogenic Substances, Indian Journal of Pharmacology, 1997; 29(1):
17. Srivastava K.K, Adaptogens In High Mountains, Indian Journal of Natural products, 1995; 11.
18. Khajuria, A; Shanna, M.L. & Sharma, O.P., Modulation of Specific and Nonspecific Immune Response by *Ocimum Sanctum*, Indian Journal of Pharmacology, 1997; 29(1).
19. Girija Kuttan, Use of *Withania Somnifera* Dunal As an Adjuvant During Radiation Therapy, Indian Journal of Experimental Biology, 1996; 34: 854-856.
20. Khajuria, A; Shanna, M.L. & Sharma, O.P., Modulation of Specific and Nonspecific Immune Response by *Ocimum Sanctum*, Indian Journal of Pharmacology, 1997; 29(1).
21. Pandey, K. K., Pandey, S.B., Sedative and Tranquillizing Properties of Medhya Drugs, Aryavaidyan, 1995; 8(4): 198-200.
22. Koshi, V., Prabhakar, C., Vaidyanathan, B., Effect of Sankhapushpi On the Physical and Mental Agility of Institutionalized Children - A Preliminary Study.
23. Chatur Prabhakar; Koshy, V; Menon, S; Vaidyanathan, B., Effect of *Withania Somnifera*, (Aswagandha) *Asparagus racemosus* (Satavari) And Lakshadi Thailm In Improving the Physical and Mental Health of Pre-School Children, Medicinal and Nutritional Research Communications, 1994; 2: 15-18.
24. Saroja, S.; Usha, K.; Shoba, P.; Meenakumari, V., Biochemical Profile of Selected Patients with Tuberculosis and Bacterial Activity of Certain Indigenous Plants on Tubercl Bacilli, Indian Journal of Nutrition and Dietetics, 1997; 34(8): 193-198.
25. Chuddar, A.K., Rao, G., Nath, G., Dixit, S.K., Rasakarpura-An Effective Antibiotic of Ayurveda, National Conference on Shothahara (Antiinflammatory) Jeevanuhara (Anti- Bacterial) Ayurvedic Medicines, 14-15th March, 1999. New Delhi.
26. Dalvi, S.J., Ravetkar, S.D., Kulkarni, P.H., Antibacterial Properties of Ayurvedic Preparations Bhallatakasava & Sukshma Triphala, Journal of NIMA, 1999; 41(5): 5-7.
27. Nair, A.; Bhide, S.V., Antimicrobial Properties of Different Parts of *Semicarpus Anacardium*, Indian Drugs, 1996; 33(7): 323-328.
28. Pradeep Kumar Prajapati, Damodar Joshi, Govind Prasad Dube, An Experimental Study on Makaradhwaja. Ancient Science of Life, 1997; 302-306.
29. Ghosal, S., Ayurvedic Herb mineral Vitalizers – Ancient and Modern Perspectives, Indian Journal of Indigenous medicine, 1996; 17(2)
30. Saroja, S.; Usha, K.; Shoba, P.; Meena Kumari, V., Biochemical Profile of Selected Patients with Tuberculosis and Bacterial Activity of Certain Indigenous Plants on Tubercl Bacilli, Indian Journal of Nutrition and Dietetics, 1997; 34(8): 193-198.

Efficacy of Yoga in the Management of Hypertension

Dr. Mohamadasif Kakatikar
PG Scholar, Dept. of Swasthvritta

Dr. Milind Godabole
Guide, Dept. of of Swasthvritta

Dr. Kaplanra Jadhav
HOD, Dept. of of Swasthvritta

Yashwant Ayurvedic Medical Collage & Hospital Kodoli, Dist. Kolhapur .

Abstract :

Hypertension is also known as a silent killer Disease .In the hypertension blood pressure were increases, it leads to kidney disease, heart failure and stroke. Some of the common causes of this long term condition are hereditary, excessive body weight, excessive salt, sedentary lifestyle, stress and excessive alcohol and cigarettes. In which yoga gives magical results, Yoga, when performed mindfully, can reduce this type of stress-induced hypertension, while addressing its underlying causes. It pacifies the sympathetic nervous system and slows down the heart, while teaching the muscles and mind to relax deeply. In this article we have to focus on some needful asana's helps to maintain the Blood pressure.

Key words - Hypertension , stress-induced hypertension, Yoga.

Introduction :

Severe high blood pressure symptoms include heartbeat, breathing difficulty, ringing in the ear, dizziness and palpitation. That's why the early management of disease is very important While a general yoga practice has a pacifying effect and can bring the nervous system into balance, some asanas work better than others for actually lowering blood pressure—and simple modifications make others more beneficial. The force blood exerts against the walls of arteries as it travels through the circulatory system ,It fluctuates during the day, increasing during exertion or stress and decreasing when the body is at rest. The top number (the systolic pressure) refers to the amount

of pressure in the arteries when the heart beats or contracts. The bottom number measures the diastolic pressure, or how much pressure remains in the arteries between beats, when the heart is relaxed. Although several conditions can cause secondary high blood pressure (kidney disease, hormone abnormalities, type 2 diabetes), more often than not a high-stress lifestyle can lead to hypertension, where there is no disease-specific cause.

Aim & objectives :

- ❖ Conceptual study of Yoga
- ❖ To study the efficacy of yoga in the Hypertension .

Material & methods :

Yoga is the one of the important part of Indian tradition or medicinal therapy. Which is broadly described by acharyas .Data about collected from Ayurvedic samhitas viz , Classical books like Hathayoga pradipika , Yo vidnyayan etc .Also ,evidence based resources as journals, books, and data based information from various search engines were referred for recent information.

Importance of yoga in management of hypertension :

- ❖ Yoga asanas involve breathing consciously and deeply while synchronizing your body movements. They can help control blood pressure naturally, primarily by relieving stress.
- ❖ Yoga asanas can soothe the nerves and help slow down an abnormal heart rate.
- ❖ Yoga helps in increasing immunity and reducing incidences of heart problems like heart attacks and strokes.
- ❖ Lack of sufficient rest is the primary reason for stress and hypertension. Yoga helps regularize sleep habits and patterns.
- ❖ Obesity can also lead to hypertension. Regular practice of yoga and an improved diet regulates body weight.
- ❖ Yoga gives positive energy to the body and mind. It makes you happier and more hopeful in life. In the long run, this helps to regulate blood pressure levels.

Yoga Poses for high blood pressure :

1. Shishuasana (Child Pose)
2. Vajrasana (Diamond Pose)
3. Paschimottanasana (Forward Bend Pose)
4. Shavasana (Corpse Pose)
5. Sukhasana (Easy Pose)
6. Ardha Matsyendrasana (Sitting Half Spinal Twist)
7. Badhakonasana (Butterfly Pose)
8. Janusirsasana (One-legged Forward Bend)
9. Virasana (hero pose)
10. Setu Bandhasana (Bridge Pose)
11. Ardha halasana (half plow pose)

Pashchimottanasana :

Sit on two folded blankets and extend your legs straight in front of you in dandasana (seated staff pose), feet hip-width apart. Place a bolster lengthwise on top of your legs, with a folded blanket on the bolster closer to your feet. Lift the sides of torso up, slumping backward, sit on more support. Extend forward and hold the outside edges of feet with hands. Lengthen abdomen over the bolster and rest forehead on the blanket. Hold a belt around the feet; if head doesn't reach the blanket, rest it on a chair instead, padded with at least one blanket. Straighten your legs and press the thighbones toward the floor as much as without allowing heels to lift. Relax the forehead and spread elbows as release the shoulders apart and away from neck. Extend through the backs of the heels and move back ribs toward front ribs down onto the bolster. Keep the back of the neck long and soft and relax facial features. Hold for two minutes and then return to dandasana.

Halasana :

Bring arms back by sides and place palms on the bolster. Rotate upper arms outward and open the chest. Pressing hands into the bolster, bend knees toward chest, lift pelvis off the bolster, and take feet overhead, toes onto the seat of the chair. Separate feet as wide apart as the seat of the chair, toes curled under.



Clasp hands behind back, straighten the arms, and roll onto the outer front edges of shoulders. Press your wrists into the bolster and lift the sides of chest away from the floor. Pressing toes down, lift the fronts of thighs away from head and straighten the legs. Release the clasp of hands and rest the backs of hands on the floor besides head, elbows bent at a 90-degree angle. Keep the legs active but head and neck passive, and throat and face completely relaxed.

Setu bandha sarvangasana :

Sit on the front end of a bolster and belt the tops of thighs together. With knees bent and feet on the floor, lie back onto the bolster. Using feet to push against the floor, slide off the bolster just until shoulders reach the floor and are at the same level as head. Then extend legs straight, backs of the heels on the floor.



Roll the outer edges of the shoulders underneath and broaden chest as lengthen arms alongside the bolster. Turn the upper arms out and the palms toward the ceiling.

Balasana :

It is beneficial for hypertension patients. It can give relief from different factors which contribute to high blood pressure. This asana reduces stress and improves blood circulation throughout the body. Controlled breathing while performing this asana promotes calmness and reduces stress from neck and shoulders.

Sukhasana :

It is a popular yoga asana which regulates breathing. This pose gives relief from high blood pressure by promoting a peaceful mind and reducing stress. A relaxed mind promotes a healthy body. This asana will also stretch back and neck. It will also improve the posture of the body.

Shavasana :

Shavasana or corpse pose is totally meant for relaxation. This is one of the easiest poses which can try to control blood pressure numbers.

Importance - Shavasana calms brain, relieve stress, relaxes the body, reduces headache, fatigue and insomnia. These all are the risk factors of high blood pressure.

Bhujangasana :

Bhujangasana is helpful in circulating blood and oxygen. This pose also relieves stress and promotes heart health. Patient Fills more flexibility with this pose.

Discussion :

- ❖ Hypertension is an independent condition which means that it is not triggered by other medical conditions like diabetes, heart-related problems or kidney malfunctioning.
- ❖ Stress is a significant factor that causes hypertension. When we are stressed, our heart beats faster, our blood vessels contract.
- ❖ Other factors such as adverse lifestyle choices including smoking, drinking, drug abuse also causes harm.
- ❖ Exercise is very important for avoiding of hypertension .

Conclusion :

- ❖ Yoga, when performed mindfully, it reduces stress-induced hypertension, while addressing its underlying causes.
- ❖ It pacifies the sympathetic nervous system and slows down the heart, while teaching the muscles and mind to relax deeply.

References :

- 1) Ayurvedahara by Dr. P. H. Kulkarni published by Ayurveda education series.1998
- 2) Swasthavritta by Dr.SubhashRanade published by chaukhamba Sanskrit Pratisthan 2009.
- 3) Ayurvediyamanasvijnana (1986) - prof. R.H. Singh Choukhamba Amarabharti Prakashan
- 4) Ayurvedvimarsha by Dr. Ganesh Karajkhede, published by ojas Ayurveda prakashana 2004.

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