

Etiopathogenesis of lifestyle disorders: Preventive insights from swasthavritta and Diagnostic perspective from Roga Nidana

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ABSTRACT

Lifestyle disorders, known as non-communicable illnesses, and it is a significant health challenge worldwide which usually result from prolonged disruptions in food, physical activity, mental discipline, and daily routines. Ayurveda, being an ancient medical science, offers a holistic framework for lifestyle disorders through an integrated perspective of the body, mind, and lifestyle. As per Ayurvedic classics, diseases primarily arise from prajnaparadha, asatmyendriyarthasamyoga and parinama resulting in dosha-dushya sammurchana and the subsequent manifestation of disease. Lifestyle disorders, including obesity, diabetes, hypertension, mental illnesses, and osteoporosis, are primarily santarpanajanya vyadhis arising from chronic over-nourishment, sedentary behaviour, stress, and disturbance of biological cycles. Present article examines the etiopathogenesis of lifestyle problems from an Ayurvedic viewpoint and emphasises the significance of the Roga Nidana for early diagnosis and disease staging via nidana, purvarupa identification, samprapti analysis, and rogi-roga pariksha. The role of swasthavritta practices such as dinacharya, ritucharya, ahara-vihara, rasayana, sadvritta, and panchakarma in the prevention and management of lifestyle disorders..

Keywords: Lifestyle disorders, Swasthavritta, Roga Nidana, Prajnaparadha, Non-communicable diseases, Lifestyle disorder

1. INTRODUCTION

Ayurveda being oldest system of medicine, having origin in India over 5,000 years ago offers integration of physical, mental, and spiritual well-being. This is science of life which focuses preventive and curative aspects offboth. According to the Sushruta Samhita,

समदोषः समाग्निश्च समधातु मलक्रियः। प्रसन्नात्मेन्द्रियमनाः स्वस्थ इत्यभिधीयते॥¹Su Su 15/ 10

The definition of health is a person when the three doshas like Vata, Pitta, Kapha are in samyaawastha, Agni functions Normally, Dhatus like rasa, rakta, mamsa, meda, asthi, majja, shukra, and Malas namely purish, mutra, sweda works normally. The Manas, Indriyas, and Atma are in a state of harmony. This definition perfectly aligns with World Health Organization definition which is health as complete physical, mental, and social well-being and not merely an absence of disease or infirmity².

Lifestyle diseases are also known as Noncommunicable diseases. These are chronic diseases manifested as result of a combination of genetic, physiological, environmental and behavioural factors. The main Lifestyle diseases are cardiovascular diseases like heart attacks and stroke, cancers, chronic respiratory diseases such as chronic obstructed pulmonary disease and asthma, diabetes, hypertension, Alzheimer's, obesity mental health issues like anxiety and depression and osteoporosis. the risk factors to develop lifestyle disorders are modifiable behaviours, such as tobacco use, unhealthy diets, physical inactivity, and the harmful use of alcohol etc³. Sedentary lifestyles, processed foods, and chronic stress also support its manifestation. According to global health reports, 71% of all deaths worldwide are as a result of lifestyle diseases. In India over 200 million people suffer from diabetes, and obesity. These rates have tripled in the last twenty years.⁴ Among Indians, the incidence of these diseases is increasing rapidly in the past few decades as a result of rapid economic development and increasing westernization of lifestyle.⁵

The 3 prime reasons to have any disease as per ayurveda is prajnaparadha that is intellectual errors, asatmyendriyarthasamyoga that is improper sensory use and parinama that is seasonal/time changes. In context of lifestyle disorders this has to be taken into consideration. This results in dosha-dushya- samruchana and produces diseases as per Sthanasamshraya. For example, meda dhatu dushti causes sthoulya.

The treatment options available for lifestyle disorders involves drugs, surgery, and lifestyle modification, but chances of reoccurrence are always there. Ayurveda is a great choice for lifestyle diseases because it takes a holistic approach, treating the full person and focussing on their physical, mental, and spiritual health.

For lifestyle disorders ayurveda can provide better outcome by following swasthavritta. Swasthavritta is branch of ayurveda which deals with measures to prevention of manifestation of diseases by maintaining health. It includes several measures like Dinacharya, Ritucharya, Rasayana, sadvritta, Pathyapatya, Panchakarma etc.⁶ By integrating these practices into modern life, individuals can achieve optimal health, reducing chances of development of lifestyle disorders.

2. AIMS AND OBJECTIVES

To understand the etiopathogenesis of lifestyle disorders from an Ayurvedic perspective

Highlight the integrated role of Swasthavritta in prevention

Highlight the integrated role of Roga Nidana in early diagnosis

Discussion on Etiopathogenesis:

The main culprit in the manifestation of lifestyle disorders is disrupted biological clock, changes in living pattern unhealthy eating habits like increased reliance on junk food, alcohol, and smoking, and lack of physical activity. The genesis of psychosomatic disorders is attributed to pure psychological and inherent control over physical and sensory processes.

As per ayurveda, prajnaparadha, asatmyendriyarthasamyoga and Parinama are the three reasons to have any type of diseases. Among them Pragyaparadha i.e knowing doing wrong things found to be main and basic reason for the development of lifestyle disorders.⁷ Pragyaparadha includes, not following proper dinacharya, ritucharya, sadvritta, ahara also contribute for the manifestation of lifestyle diseases. Vegadharana e.g., habit of suppression of any natural urge also main reason to cause disease because not getting rid of waste properly, which leads to toxins building up in the body and causing sickness.

When these vitiated doshas gets sthanasamshraya in different places, results in manifestation of different diseases. For example, the diseases like atisthaulya (obesity), madhumeha(diabetes) etc are falling under category of santarpana janya vyadhis that is diseases due to over-nourishment. For example, Excessive kapha accumulation due to a sedentary lifestyle leads to fat, whereas vata aggravation from stress contributes to hypertension.⁸ Diabetes meda dhatu dushti, imbalance of kapha-pitta, manifesting as excessive thirst, urination, and fatigue. Rakta chapa and other hypertension analogues cause vata-pitta vitiation, which leads to headaches and stress on the heart and blood vessels. Rajas-tamas guna dominance causes mental lifestyle illnesses like anxiety, which are made worse by stress at work and being alone. Ayurveda associates these with disruptions of manas (mind), highlighting the mind-body relationship.⁹ Derangement of Asthi dhatu leads to asthisoushrya i.e osteoporosis.

Discussion on Diagnostic perspective through Roga nidana

Roga Nidana is the branch of ayurveda which deals with diagnosis of diseases. It will help to decide staging of disease which helps to treat it effectively. Early diagnosis of lifestyle disorder contributes strongly in prevention of disease. When it comes to diagnostic perspective Nidana Panchaka offers a complete clinical logic. Nidana Panchaka includes nidana (etiological factors), purvarupa(prodromal symptoms), rupa (clinical features), Upshaya, samprapti (Pathogenesis). By observing this one can get therapeutic clues about disease and start early treatment.

Nidana: According to ayurveda, three main reasons to cause any disease is asatmyaindriyarthasamyoga i.e corresponds to repeated exposure to incompatible diet patterns. 2nd is Pragyaparasha i.e Failure of self-regulation and third is Parinama i.e Time and seasonal influences. When comparing to evolution of modern lifestyle and ayurvedic perspective nidana are Aharaja i.e dietary factors, Viharaja i.e inactivity and rhythm disruption, Manasika i.e psychological factor. Aharaja i.e Dietary nidana in lifestyle disorders commonly reflect chronic overnutrition and digestive overload. Most of the lifestyle disorders falls under santarpanajanya vyadhis. It corresponds to frequent intake of calorie-dense, heavy and oily foods, habitual overeating. Irregular meal timing and late-night heavy meals disturb appetite rhythm and stress digestion. Also, Adhyashana i.e repeated eating before earlier meals are processed, Viruddhahara i.e Incompatible food combinations contribute for disease manifestation. Viharaja nidana largely revolve around inactivity and rhythm disruption like Avyayama, Diwaswapna becomes a defining feature for many modern patients which often compared to sedentary lifestyle. Vegadharana i.e suppression of natural urges, Contributes to regulatory disturbance. Psychological nidana like Chronic worry, anger, mental fatigue, and emotional overload act through prajnaparadha, where the individual repeatedly fails to sustain behaviors aligned with health. This psychological burden intensifies sleep disruption and appetite dysregulation

Purvarupa are Prodromal symptoms occur before to the complete manifestation of a disease. They indicate early dosha–dushya samurchana. **Rupa** is the point in an illness when the symptoms are clear and can be diagnosed. **Upashaya** means certain food, activities, or treatments that help with disease or symptoms. In Roga Nidana, it is used to figure out the dosha, illness, and samprapti.

Samprapti: The central Ayurvedic metabolic triad that repeatedly appears in lifestyle disorders is the interdependence of agni, ama and srotas integrity. The above explained persistent nidana sevana leads to agnidushti at the level of jatharagni and Dhatwagni dushti leading to agnimandya. When these agnis are weakened, overloaded, leads to irregular digestion. This impaired processing led to amaautoatti and facilitates dosha aggravation. As this continues, srotas lose functional integrity, manifesting as srotodushti or Srotorodha. Due to which transport, distribution, and transformation at tissue level become inefficient. When it comes to lifestyle disorder, this leads to cardiometabolic disorders. In many metabolic diseases kapha dominance appears early, often with meda involvement, chronicity tends to increase vāta prominence, especially when complications emerge. Pitta frequently participates as metabolic “heat,” inflammatory tendency, or irritability and impatience that accompany stress and disturbed sleep. As this continues, multiple srotas become involved, commonly including annavaha, Rasavaha, Raktavaha, Medovaha, Mutravaha, resulting in a systemic pattern rather than an organ-limited disease. As per ayurveda disease doesn’t manifest suddenly, there are stages of disease manifestation and progression includes Sanchaya, Prakopa, Prasara, Sthansamshrya, Vyaktawastha, Bhedawastha. Early phases such as chaya and prakopa may present only as stabdhapurna koshta, pitavabhasta, madoshmata, atopya, osha, chosha, paridaha etc which many patients normalize. By the time the pathology reaches sthanashamshrya and vyaktawastha, measurable disease appears and may already be accompanied by complications. The staging model explains why lifestyle disorders are often detected late. Let’s consider example of major lifestyle disorders i.e Obesity can be understood through the framework of sthoulya, medoroga. Here chronic santarpanjanya nidana combined with inactivity and rhythm disturbance leads to meda accumulation and inefficient tissue transformation. Clinically, patients often show heaviness, lethargy, reduced exercise tolerance, and post-meal drowsiness, reflecting kapha–ama tendencies and early srotorodha features. Roga Nidana also includes Rogi–roga pariksha which contribute in diagnosing the disease. It includes Ashtasthana pariksha like Nadi, mala, mutra, jivha, Shabda, Sparsha, Druk, Akriti and Dashavidha pariksha like Prakriti, vikriti, sara, samhana, sattva, satmya, aharshakti, Vyayamshakti, vāya. It helps clinicians decide how intensive the intervention should be, how rapidly changes can be introduced, and which preventive levers are most likely to succeed for a given patient. This is a diagnostic perspective that naturally integrates prevention. The earlier the clinician identifies purvarupa and early-stage samprapti, the more the intervention can remain lifestyle-centered rather than medication-heavy.

Discussion on Preventive aspect through swasthavritta

The aim of Ayurveda is Swasthasya Swastha Rakshanam and Aaturasya vikara Prashaman ch' signifying the preservation of health in healthy individuals and secondarily treating the disease.¹⁰ To preserve health of person Ayurveda offers Dinacharya, Ritucharya, Rasayana, sadvritta, Pathyapatya etc. Ayurveda also provides several treatment options after manifestation of disease like Panchakarma like detoxification and bio-purification procedures, medicaments, and rejuvenation therapies along with proper dietary management, lifestyle changes aim toward complete physical, psychological, and spiritual well-being

Swasthavritta is Derived from "swastha" (health) and "vritta" (regimen or conduct), it focuses on preserving health in healthy individuals and preventing diseases before they manifest. The first advice every patient should receive is Nidana parivarjana i.e avoidance of causative factors or risk factors. In context of Lifestyle disorders, it includes Avoid suppressing Adharaniya Vegas, refrain from consuming Virudhahara, abstain from Vihara and Mithya ahara, Avoid Pragyaparadha.

To correct etiopathogenesis of lifestyle disorders, Ayurveda, through swasthavritta offers several options like a sustainable alternative by correcting etiological factors like like Dinacharya, Ritucharya, Rasayana, sadvritta, Pathyapatya etc. principles of swasthavritta's are holistic, addressing physical, mental, and spiritual dimensions. These measures operate together to keep doshika balance, boost agni, and increase ojas, which are important for health and energy.

Dinacharya: Dinacharya, or daily regimen, is an important component of Swasthavritta, outlining practices from waking to sleeping to align with the body's natural circadian rhythms. Charaka Samhita details dinacharya as essential for preventing dosha imbalances that lead to lifestyle disorders. The routine begins with brahma muhurta around 4-6 am, when vata is dominant, promoting clarity and digestion. Following is ushapan to flush toxins, aiding in obesity management by boosting metabolism. For oral hygiene dantadhavana and Jihva Nirlekshana i.e Tongue scraping with long, flexible strip made of metal or plant material. Kavala i.e Gargling with either cold or warm water. Mukha Prakshalana i.e face wash, Anjana i.e Collyrium should be applied using Anjana Shalaka, a metal or glass applicator stick. Nasya i.e Nasal medication, Daily use of Prati-marsha Nasya is vital for preventing Urdhva-jatrugata Vyadhi, hair loss, and greying of hair. Dhumapana i.e Medicated smoking, Gandusha i.e Any liquid similar to sesame oil should be retained in the mouth without movement. Abhyanga oil massage improves circulation, reduces stress, and supports skin health. Benefits include wrinkle prevention and enhanced ojas.¹¹ Vyayama is recommended moderately, half one's capacity to build strength without exhaustion. For obesity, brisk walking or surya namaskar burns kapha; for diabetes, it regulates blood sugar. Yoga asanas like tadasana and pranayama

calm the mind, alleviating anxiety.

Ritucharya: Seasonal Adaptations for Mitigation Ritucharya, the seasonal regimen, modifies diet and lifestyle according to the six seasons: shishira (late winter), vasanta (spring), grishma (summer), varsha (monsoon), sharad (autumn), and hemanta (early winter). Ritucharya mitigates dosha imbalances throughout specific seasons, hence aiding in the avoidance of lifestyle illnesses. During vasanta, kapha exacerbates, resulting in allergic reactions and weight accumulation; hence, ritucharya suggests the consumption of pungent, bitter foods and rigorous activity to mitigate kapha, thereby preventing obesity. Grishma exacerbates pitta; cooling meals such as fruits and moderate exercises mitigate heat-related conditions including hypertension exacerbations. Varsha diminishes agni; warm, light foods avert digestive issues associated with diabetes. Sharad constructs pitta; bitter ghee and purgation facilitate detoxification, supporting metabolic equilibrium. Hemanta and Shishira exacerbate Kapha and Vata; substantial, nutritious foods and oil massages enhance vigour and restore dosha balance. Ritucharya encompasses shodhana (purification) such as vamana in spring for the alleviation of kapha, hence mitigating the dangers of non-communicable diseases. Seasonal detoxification mitigates fat formation in obesity, while Grishma's low-glycemic diets regulate blood sugar levels in diabetes. Hypertension is alleviated by Sharad's soothing techniques. Contemporary uses necessitate monitoring seasonal variations and making adjustments, such as increasing hydration during summer. Ritucharya guarantees year-round equilibrium, rendering it essential for the therapy of lifestyle disorders¹²

Rasayana:

The means by which one gets the excellence of Rasa Dhatu (the nourishing fluid which is produced immediately after the digestion) and other Dhatus is known as Rasayana.¹³

There are several types of rasayana like on the basis of mode of administration: Kutipravesika Rasayana, Vatatapika Rasayana.¹⁴ On the basis of mode of action: Samshodhana Rasayana (It rejuvenates body by expelling the aggravated Doshas) Samshamana Rasayana(It rejuvenates body by pacifying the accumulated Doshas.).¹⁵ On the basis of Utility: Kamya Rasayana (which are used to serve a special purpose in life Like Prankamya, Medhakamya, Shrikamya), Naimittika Rasayana(used in the treatment of various disorders e.g Shilajatu, Amalaki, Haridra for Prameha) Aajasrik Rasayana(Food substance on regular basis for body nourishment like Cow's milk)¹⁶ On the basis of Dravya: Dravyabhuta Rasayana (various herbs, minerals are used) Adravyabhuta Rasayana (Modalities like good behavior, meditation etc. are used like Achara Rasayana) On the basis of drug, diet and lifestyle- It is further divided into 3 types: Aushadha Rasayana (Based on drugs and herbs), Ahara Rasayana (Based on diet and nutrition), Achara Rasayana (Based on conduct, behavior and lifestyle)¹⁷

Sadvritta: Ethical Conduct for Psychological Well-being Sadvritta, the ethical code of conduct, emphasises mental and social hygiene to avert psychological imbalances that lead to lifestyle illnesses. It encompasses ahimsa (non-violence), satya (truthfulness), asteya (non-stealing), and brahmacharya (moderation), promoting sattva guna for cognitive clarity. Stress resulting from unethical conduct exacerbates vata, resulting in anxiety and hypertension. Sadvritta advocates Sadvritta: Ethical Principles for Mental Well-being Sadvritta, the ethical code of conduct, emphasises mental and social hygiene to avert psychological imbalances that lead to lifestyle illnesses. In obesity, it controlling emotional eating; for diabetes, it encourages disciplined habits. Mental health benefits include reduced depression through positive interactions.

Ahara vihara: Ahara and vihara are core areas of Swasthavritta . Rules to be followed while eating include eating fresh, seasonal, dosha-balanced foods in moderation. Ahara should be Sattvic like grains, fruits, vegetables which promote health. On other hand rajasika foods like spicy and tamasic like processed needs to be avoided. For obesity, kapha-reducing bitter tastes; for diabetes, low-glycemic options like barley. This prevents ama formation, key to metabolic disorders.¹⁸ Avoid overeating, follow fixed timing of eating. One should consume the next meal only after the previous one has been completely digested. The diet should be suitable for their age and the season. Unhealthy eating habits to avoid include irregular meal timings, overeating, following an inappropriate or inconsistent diet has to be avoided.

Along with ahara, vihara also has equal importance. Physical Practices like Yoga and Vyayama should be followed for Vitality Yoga and exercise in Swasthavritta build resilience. Asanas improve flexibility, pranayama regulates breath, meditation calms mind. For obesity, dynamic yoga burns calories; for diabetes, it enhances insulin sensitivity; for hypertension, it lowers pressure. Regular practice prevents disorders by balancing doshas.¹⁹

Panchkarma: In Ayurveda, Panchakarma therapy is considered as more effective than Samshamana therapy because the doshas treated with Samshamana may sometimes be re-triggered by the nidana sevana. Panchakarma includes vamana (therapeutic emesis), virechana (therapeutic purgation), asthapana basti (therapeutic decoction enema), anuvasana basti (therapeutic oil enema), and Nasya Karma (nasal medicine). By eliminating toxins from the body, It enhances mental, physical, and emotional well-being, leading to an improved sense of self-worth and overall health, hence contributing to prevention and management of various lifestyle-related issues. Common lifestyle disorders treated with Panchakarma include. Vamana: diseases dominated by Kapha, such as obesity, diabetes, asthma etc. 2. Virechana: diseases dominated by Pitta like hyperacidity. 3. Basti: Conditions associated with Vata include arthritis, spondylitis, musculoskeletal problems etc. 4. Nasya: for issues like migraines, sinusitis, hair loss, insomnia.

Discussion on Integration and clinical relevance:

Swasthavritta is not rigid, its application changes based on prakriti, age, season, and environment. Hence the theories of swasthavritta can easily adaptable to urban lifestyles. Integrating yoga, meditation, and herbal medicines with Swasthavritta enhances resilience against lifestyle disorders. Swasthavritta shifts the paradigm from reactive healthcare to preventive self-care, empowering individuals to manage their health destiny.

A practical approach to pair Ayurvedic staging with objective markers like BMI, blood pressure, fasting glucose/HbA1c, lipid profile, and liver enzymes etc and advising lifestyle changes accordingly will act as bridge between roga nidana and swasthavritta. These objective markers quantify severity and track outcomes, while Ayurveda clarifies why imbalance is occurring, which nidana are responsible for disease and which stage of the disease. The value of this integration is supported by studies in which Ayurveda intervention combined with lifestyle modification and Yoga was evaluated under public health integration models. Effect of Ayurveda intervention, lifestyle modification and Yoga in prediabetic and type 2 diabetes under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)-AYUSH integration project by Ramavtar Sharma et al concluded that Ayurveda intervention, effectively controls blood sugar level in pre-diabetic and type 2 diabetic patients and improves the disease management with lifestyle modification and Yogasana as well as with allopathic treatment.²⁰

Research already done

“Effectiveness of a Lifestyle Intervention on Metabolic Syndrome. A Randomized Controlled Trial” was conducted by Simona Bo et al and found that A lifestyle intervention, carried out by trained professionals according to general guidelines, significantly improves dietary and exercise patterns in the short-term and provides substantial reductions in the prevalence of multiple metabolic and inflammatory abnormalities, even with modest weight loss. However, the usual care provided by family physicians is ineffective in contrasting the tendency of a high-risk group to worsen their metabolic condition. The transferability of the results of pragmatic intervention trials to other settings indeed remains questionable.²¹

“Yoga Nidra for hypertension: A systematic review and meta-analysis” was conducted by Navdeep Ahuja and concluded that yoga nidra is effective in reducing SBP and DBP, particularly in individuals with hypertension. The results highlight the potential of YN as a complementary therapy for hypertension management. Healthcare providers may consider recommending YN to patients with hypertension as an adjuvant therapy to medication. Further studies are required to identify standardized optimal forms and durations of YN best suited for hypertension management.²²

Effect of Ayurveda intervention in the integrated management of essential hypertension- a retrospective observational study by Ramavtar Sharma et al, Concluded that Ayurveda medication along with lifestyle management and Yoga effectively controls systolic and diastolic blood pressure and further helps in reducing/discontinuation of dose of conventional medicines in EHTN participants. 23

“A study on Ayurvedic routines showed improved glycemic control in diabetics through consistent practices” concluded that, for hypertension, pranayama reduces sympathetic activity, lowering blood pressure. Personalization is key: vata types need grounding routines, pitta cooling ones, kapha stimulating. Integrating dinacharya into busy schedules via apps or reminders makes it feasible, yielding benefits like weight loss and mental clarity. Dinacharya fosters discipline, transforming chaotic lifestyles into harmonious ones, directly combating the root of lifestyle disorders.²⁴

Sanjeev Rastogi et al in study entitled “Prameha purvaroopas as diabetes risk predictor - trends from a retrospective cohort study of newly diagnosed type 2 diabetes patients” observes that few prediabetes features show their clear retrospective presence in diabetic population comparing to non-diabetic and healthy population. This observation can help formulating a risk calculator for future diabetes on the basis of available pre diabetic features in an individual. A prospective cohort study however would be essential to prove any such realistic relation between prediabetes symptoms and future diabetes development among high risk individuals.²⁵

3. CONCLUSION

Lifestyle disorders are the significant health concern resulting from prolonged disruptions in nutrition, behaviour, mental discipline, and biological cycles which aligns with to pragyaparadha, asatmyendriyarthasamyoga, and parinama explained in ayurveda. This results in dosha-dushya sammurchana and produces disease. Ayurveda offers a comprehensive and sustainable approach for management and prevention of lifestyle disorders through the integrated use of Roga Nidana for early diagnosis and staging, and Swasthavritta, which focusses on prevention via disciplined dinacharya, ritucharya, sadvritta, ahara vihara etc. Combining these traditional principles with contemporary diagnostic indicators can become a proactive, preventive, and patient-centered model to enhance quality of life.

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