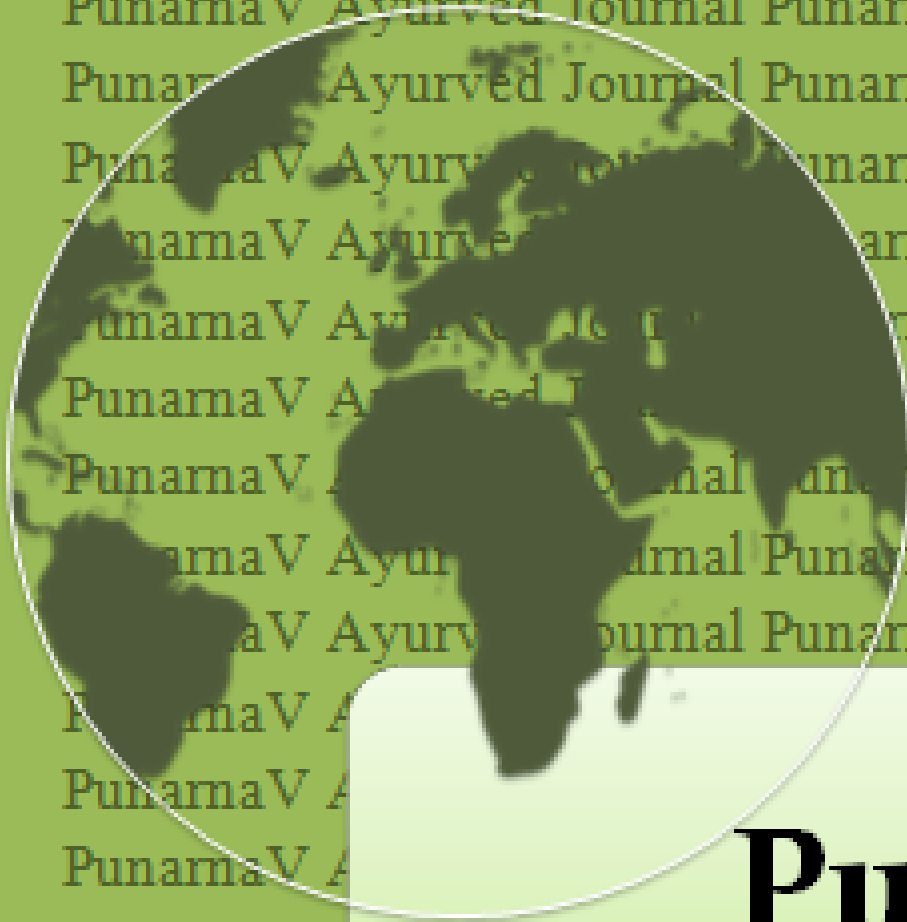


MONTH: MAY: JUNE-2015

VOLUME: 3, ISSUE: 1

ISSN: 2348-1846



Punarna V

TITLE

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**AN INTERNATIONAL PEER REVIEWED AYURVED JOURNAL
ON LINE BI-MONTHLY AYURVED JOURNAL**

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OCCUPATIONAL LIFESTYLE DISEASES-AN EMERGING ISSUE

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ABSTRACT:

Occupational health is a sector of healthcare that is concerned with the protection, safety, health and welfare of workers. We all tend to spend most of our time working but we do not think about the effect that our working environment has on our mental and physical health. According to the World Health Organization “occupational health deals with all aspects of health and safety in the workplace and it has a strong focus on primary prevention of hazards”. Factors such as long working hours, issues related to one’s salary, promotions, work related stress and conflict, which contributes to the efficiency of a worker. The long term effects of these factors can lead to a number of lifestyle related disorders. Individuals who are employed in the industrial sector are often exposed to noxious gases that can produce diseases such as dermatitis. Exposure to poisonous chemicals, pollution and radiation can lead to cancer and respiratory diseases such as Asthma. Common complaints amongst construction workers are herniated discs, neck, leg and back pain and torn muscles and tendons. Those who work in advanced laboratories present a big risk as they deal with fungi, bacteria and insects on a regular basis. These workers are at risk for contracting and spreading viral infections such as influenza and the H1N1 virus amongst many. There are also a number of psychosocial factors that play a role in occupational health. Ayurved also highlights glimpses of occupational related issues in relation to health hazards and how to prevent that. To prevent these lifestyle disorders from occurring good management and excellent work ethic is a necessity.

KEYWORDS : Ayurved, Lifestyle disorders Occupational health hazards.

INTRODUCTION

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Occupational health is a part of the healthcare system that is often overlooked by management teams and fellow employees. One cannot stress the importance of occupational care in preventing and maintaining a healthy lifestyle. Due to the major developments in the working environment occupational health is a budding issue. It is a subject that is concerned with the health, safety and well-being of an employee in a working environment. According to the World Health Organization “occupational health deals with all aspects of health and safety in the workplace, and it has a strong focus on primary prevention of hazards”¹. In *Ayurved* occupational care was also referenced in *asatmya indriyarthasamyoga* and *janapadadhvamsa*. People are predisposed to various diseases based on their way of living and occupational habits. They are preventable, and can be lowered with changes in diet, lifestyle, and environment. Lifestyle diseases characterize those diseases whose occurrence is primarily based on daily habits of people and are a result of an inappropriate relationship of people with their environment.

AIMS AND OBJECTIVES

1. Create awareness amongst physicians and students to recognize the issues that can influence the pathogenesis of disease in an occupational setting.
2. Application of the principles taught in *Ayurved* and effectively treating patients with occupational lifestyle diseases.
3. To understand the outcomes of work environment has in relation to a patients mental and physical health

METHODOLOGY

In this day and age the working environment tends to demand more from an individual. When this working demand is given more value over the health and well-being of a worker it can have detrimental effects leading to a number of occupational diseases. Issues such as long working hours, maternity leave, salary advises, delayed promotions, cutbacks, prejudice against fellow workers and stress contribute to the mental health of a worker. One of the major psychosocial disorders which have been found to influence the absenteeism and productivity of employees is depression. According to the Center for Disease Control and Prevention (CDC) statistics in the United States shows that depression is estimated to cause 200 million lost working days each year, at a cost to employers of \$17 to \$44 billion. Research shows that rates of depression vary by occupation and industry type. Among full-time workers aged 18 to 64 years, the highest rates of workers experiencing a major depressive episode in the past year were found in the personal care and service occupations (10.8%) and the food preparation and serving related occupations (10.3%). Occupations with the lowest rates of workers experiencing a major depressive episode in the past year

were engineering, architecture, and surveying (4.3%); life, physical, and social science (4.4%); and installation, maintenance, and repair (4.4%)².

In *Ayurved* depression can be correlated to *avasada* or *vishada*. *Acharya Charak* described this under *manasa roga* which is portrayed by symptoms of sadness, hopelessness, and irritability. It can be managed by administering *shirodhara* which has the benefits of providing a peaceful nights rest, it is also helpful in cases of depression, anxiety disorders, diabetes and hypertension. Prescribing *vajikarana* and *medhya dravya's* such as *Brahmi*, *Shankhapushpi*, *Jatamansi*, *Vacha*, *Kapikacchu*, *Ashwagandha* and *Krishna Musli* are equally important. These herbs restore hormonal imbalance, offer strength to the functions of *majjavaha srotas*, and improve the general mood and relaxation of an individual³. Other psychosocial concerns in the working environment are anxiety, stress, neurasthenia and insomnia. However, there are further methods of management for these problems such as *Yoga*, *Pranayama*, meditation and counseling. Furthermore, the principles of *daiva vyaprashraya* and *sattvavajaya cikitsa* can be advised to these patients.⁴

Employees involved in the construction field are predisposed to diseases of the nervous system, in *Ayurved* this is known as *vatavyadhi's*. Some of the causative factors include, injury over *marma's*, insomnia, weakness due to stress, grief and worry, excessive physical work such as heavy lifting and drilling, posture irregularities, suppression of natural urges and irregular consumption of food. As a result of these causative factors it can give rise to a number of diseases for example Parkinson's, *sandhigata vata*, *anaha*, *avabahuka*, *grdhrasi*, cervical spondylitis, torn muscles and tendons, *siragraha* etc.

In this working environment arthritis, carpal tunnel syndrome and back injury and pain are also common complaints.⁵

The treatments of these lifestyle disorders are very effective in *Ayurved*. The general line of treatment as mentioned by *Acharya Charaka* in the twenty eighth chapter of *Cikitsa Sthana* is as follows: *Brimhana* (nourishing) *cikitsa* is advised for individuals who are emaciated due to loss of bodily tissues. In the case of obstruction in the channels of the body, hot and penetrating *dravya's* are advised such as *Yogaraj Guggulu*, *Rasnasaptaka kwath*, *pippali mula churna* etc. However, if the condition is severe *panchakarma* is suggested. Other therapies such as *snehana*, *swedana*, *shirodhara*, *shirobasti*, *katibasti*, *brumhana nasya*, *dhumapana* and *abhyanga* can also bring excellent results. If the patient does not possess the strong will and strength to undergo *panchakarma* then *shamana* (palliative) *chikitsa* is recommended. Amongst all the *panchakarma* therapies *basti karma* is the best since it alleviates vitiated *vata* directly from the *pakwashaya* (large intestine). It is proposed that one undergo alternate oil and decoction enema's to restore balance of *vata dosha*.⁶

In some working environments employees are subjected to conditions that can put their working capabilities at risk. This can be correlated with *asatmya indriyarthasamyoga*, which is incompatible contact of the sense organs with their objects. The sense organs are an important aspect in the maintenance of health. Hearing, seeing, tasting, touching and smelling are the functions that allow human beings to carry out their daily activities. Proper contact of the sense organs with their objects is necessary and it is known as *samyak yoga*. There are three means by which the sense organs can be utilized inappropriately,

namely *ayoga* (negligible), *mithya yoga* (perverted) and *ati yoga* (excessively). If the sense organs are utilized in any of the above three manners it results in the manifestation of disease⁷. The following are some occupational lifestyle disorders that can affect employees in specific professions: Workers in the urban and industrial industries who work with loud machinery and vehicles are at a risk of deafness. Those who are exposed to unpleasant sounds and words can become irritated, anxious, stressed, and experience headaches and insomnia. In chemical and industrial occupations employees are exposed to poisonous chemicals and irritants which can produce allergic reactions, skin diseases, cancer and metal poisoning. The principles explained in the management of poisonous conditions in the subject of *Agad Tantra* (toxicology) can be prescribed in these disorders. These allergic conditions can be treated externally by application of *Dashanga lepa* and *Lepa Gutika*. Individuals who work in extreme cold weather are more likely to develop rheumatism and arthritis, while workers exposed to severe heat can develop infertility, hyper acidity, stomach ulcers and skin diseases. Construction workers who handle continuously vibrating machinery and heavy equipment can develop *vata* disorders.⁷⁻⁸

Welders are constantly exposed to bright light and they may develop blindness. Consuming food that has been contaminated can lead to bacterial infections like salmonella and candida. Over eating can cause diseases such as diabetes and obesity, this increases the chances of acquiring heart diseases and high cholesterol. Industrial companies are the main contributor of air pollution. Employees in this industry are prone to upper respiratory infections, bronchial

asthma, lung cancer, carbon monoxide poisoning and so forth. Over population, unhygienic conditions and carbon emissions from vehicles in an environment can also contribute to other lifestyle diseases. Workers involved in the chemical industries are exposed to toxic chemicals such as ammonia, nitric acid and sulphur. These gases can be nauseating and may affect the productivity of a worker⁹.

A major lifestyle disease that is currently on the rise is diabetes. According to the World Health organization, workers should implement some lifestyle changes to achieve and maintain their health. Simple alterations like increasing physical activity for at least thirty minutes a day and supplementing unhealthy foods for portions of fruits and vegetables can prevent the onset of this disease and further complications¹⁰. Another escalating occupational illness is Carpal Tunnel Syndrome (CTS) it occurs when the median nerve is compressed because of swelling of the nerve or tendons or both. CTS are found amongst employees who participate in strenuous and repetitive work such as typing. Lifestyle disorders such as rheumatism and diabetes can increase the risk of carpal tunnel syndrome. Office ergonomics focuses on how a workstation is arranged, this includes the placement of your desk, computer monitor, paperwork, chair, and associated tools, such as a computer keyboard and mouse. The same ideas can help you arrange your positions for other daily activities. These are some preventative measures which can decrease the risk of CTS.¹¹

Another important factor that adds to lifestyle related disorders in a professional environment is *janapada* i.e environmental factors. In *Ayurved* this is described as a population of people who are afflicted with

disease in a specific region. The four main elements involved in environmental epidemics are air, water, land and climatic changes. Vitiating of these factors can affect the health and well-being of an individual this is known as *janapadadhvamsa*. The reasons why these epidemics are believed to occur are due to the sinful acts of people residing in that predisposed area. Polluted air which is extremely dry or moist can result in chest infections or epistaxis. Contaminated water can cause lifestyle diseases such as diarrhea and typhoid. Land or soil pollutants can enter the earth via contaminated ground water, dry air from mining grounds and wet air from acid rain as well as waste disposal. *Ayurved* mentions that property that is full of natural calamities, which possesses abnormal changes in smell; colour, taste and touch are indications that it may be contaminate¹². Direct contact of soil pollution can occur through inhalation of soil or dust particles and contact with skin. While indirect contact may be transmitted through adulterated food and inhalation of hazardous chemicals present in the soil. According to the Environmental Pollution Center a number of health problems can occur as a result of this, they include headaches, nausea, fatigue, skin rashes and eye irritation. In some cases the severity of soil pollution can lead to leukemia through soils contaminated with chemicals such as gasoline, or other petroleum products

containing benzene. Obstruction of the neuromuscular system and depression of the central nervous system may also occur; in addition the kidneys and liver can be damaged due to presence of mercury in the soil. Climatic changes can trigger infectious disease such as influenza, cholera, typhoid fever and malaria. The effect of environmental factors on an individual's health is volatile therefore it can only be managed with appropriate medication and proper diet and regimen¹³.

Despite the hazards that work environments presents to its employees there are some advantages that can generate morale in workers. On average an employee spends about eight to twelve hours per day at work. It is during this time that they develop their working skills to become more efficient and therefore they may receive recognition for their dedication to their job. In addition, the revenue earned in this environment is often quite beneficial. Other advantages may include medical cover for the employees and their families. Disadvantages of the working environment can lead to lifestyle changes which can alter the physical and mental health of an individual. The long term effects of these changes can contribute to a number of disorders for which the employee may have to incur the medical expenses. It is also in these working environments that individuals begin to lose a positive outlook on life.

DISCUSSION

With the increasing developments in technology and devices, our lifestyles have changed and so they have directly influenced our health. Due to modernization and urbanization occupations now require more technological qualifications instead of hands on labor; as a result individuals are

becoming more inactive. In some occupations employees may experience an allergic reaction such as occupational dermatitis which is caused by contact of the skin with at least one hazardous chemical. Some of the most common causes are soap and detergent products, rubber chemicals and material and

working in a wet environment¹⁴. In these conditions an individual may encounter symptoms of itching, redness and formation of vesicles or papules. Ayurvedic panchakarma procedures such as virechena are advised to alleviate this condition. External application of shita virya dravya's such as Neem and Aloe vera are also beneficial to ease any pain or burning sensation. Employees should be made aware of the chemicals and risks they are exposed to in this sort of working environment to prevent its reoccurrence¹⁴. Ama vata or rheumatoid arthritis is another

common lifestyle disorders in today's society. It usually occurs in those individuals who indulge in physical activity after they have consumed a fatty diet. Unhealthy regimen and diet disrupts the biological clock of such an individual giving rise to metabolic waste known as "ama". Ayurved recommends managing this disorder by expelling the waste from the body through fasting. Administering cleansing therapies such as virechena, snehana and Niruha basti are also very favourable¹⁵.

CONCLUSION

All the above mentioned factors have a significant effect on the manifestation of various diseases. Some of the common diseases encountered because of occupational lifestyle changes are Alzheimer's disease, arteriosclerosis, cancer, chronic liver disease/cirrhosis, chronic obstructive pulmonary disease (COPD), diabetes, hypertension, heart disease, nephritis/CRF, and stroke.

A healthy lifestyle should be adopted to combat these diseases with a proper

balanced diet, physical activity and recreation. To decrease the ailments caused by occupational health, one should avoid sitting for long periods of time, allow some time for stretching and interacting with co-workers. In this revolutionized era we have to work hard, but we can certainly reduce our ailments by incorporating these simple and effective measures into our lifestyles.

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