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Environmental Toxicity In Human Beings –A Solution Through Ayurveda

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ABSTRACT

Pollution is the introduction of contaminants into a natural environment that causes instability, disorder, harm and discomfort to the ecosystem. Due to the increase of day by day environmental pollution and slow chemical poisoning it may bring extinction of human race very soon. It has to be taken seriously, as it has a negative effect on natural elements that are an absolute need for life to exist on earth, such as water and air. Environmental pollution has five basic types of pollution, namely, air, water, soil, noise and light. Today not a single component of ecosystem remains free from pollution. It exerts harmful effects not only on human health but also destroys the environment which is the ultimately results in the destruction of life on planet earth. The need of herbs is increasing for human survival in the present day because the danger of slow chemical poisoning is ever present. Ayurveda meaning ‘the science of life’, explains that it is not only a science of medicine and medical cure of disease, symptoms only but it balances the total ecosystem of human life in the best way.

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INTRODUCTION

Pollution is the presentation of contaminants into the regular habitat that causes unfavourable change. Contamination can appear as concoction substances or vitality, for example, clamor, warmth or light. Ecological contamination comprises of five fundamental kinds of contamination, in particular, air, water, soil, clamor and light. Today not a single component of ecosystem remains free from pollution. It exerts harmful effects not only on human health but also destroys the environment which is the ultimately results in the destruction of life on planet earth.¹

From the beginning of civilization, human activities disturb the ecosystem more or less but during early period it was not very significant. Urbanization and industrialization can be considered as two main causes for action. Condition is rotting bit by bit as a result of mechanical sullyng, noxious manufactured substances, vehicle radiation and trademark resource fatigue. In the early periods, the sources of impurities in atmosphere were much different as per today. At that time pollutants were mainly organic and biodegradable. But the changing conditions introduce several new synthetic agents to the ecosystem which cannot be eliminated easily.

Sources and Causes of Environmental Pollution

Industrial activities

Chemical waste

Dumping solid waste

Household and commercial waste

Vehicles Smoke and harmful gases

Rapid urbanization and industrialization:

Population overgrowth

Massive deforestation to expand absorbs the growing population and their demands.

Combustion of fossil fuels

Noxious gases such as CO₂ and CO.

Agricultural waste:

Fertilizers and pesticides

Effects of Pollution-

1. Environment Degradation
2. Human Health
3. Global Warming
4. Ozone Layer Depletion
5. Infertile Land

Types of pollution

In recent times, Environmental Pollution occurs in different forms; air, water, soil, radioactive, noise, heat/ thermal and light.

Air pollution

Air pollution causes nearly seven million deaths a year worldwide. Due to the excessive population in cities, as well as the way in which we consume energy in urban areas through transport or heating and air conditioning systems, among others, result in the emission of huge quantities of gases that are harmful to our health.² This has heavily increased the cases of Asthma, Bronchitis and the more dangerous lung cancer.

Water pollution.

Water pollution not only harms the aquatic animals, but it also contaminates the entire food chain which severely affecting the human beings dependent on these. Many factors -industrial effluent dumped into the rivers and sea causes a huge imbalance in the water properties, Insecticides, pesticides which are sprayed on the plants, pollutes the ground water system and oil spills in the oceans have caused irreparable damage to the water bodies etc. Water-borne infections like cholera, the runs have likewise expanded in all spots.

Soil pollution.

Commercial or industrial waste, use of insecticides and pesticides, mining and deforestation are the major causes of soil pollution. Consuming of crops and

vegetables grown on polluted **soil** on a long-term basis can create the congenital diseases and chronic **health** problems. Fruits and vegetables grown on **polluted soil** have lack of quality nutrients. The crops grown in these soils are often polluted with heavy metals.

Noise pollution...Noise pollution

affects both health and behaviour. Unwanted sound (noise) can damage physiological health. It can cause high blood pressure, increase stress levels, tinnitus, hearing loss, sleep disturbances, and other harmful effects. Exposure to high noise levels causes hearing loss.³

Radioactive pollution. ... Long-term exposure to excessive amount of radiation can have far more serious health effects. Radioactive rays can cause irreparable damage to DNA molecules and can lead to a life-threatening condition.⁴ this may develop many types of Cancers.

Light pollution...Light pollution has a wide range of negative effects on human health such as disrupting our circadian rhythms, messing with our melatonin levels, and generally contributing to sleeping disorders. Disruption of these rhythms can result in insomnia, depression, cancer, and cardiovascular disease.⁵

Environmental pollution described in Ayurvedic literature

Our ancient seers emphasize on human activities which produces impurities in environment.

In Charak Samhita under the title “*Janpadodwamsa*”, the great seer mentioned the cause of unhealthy environment is the adharma of rulers and residents of that particular area which leads to the impairment of the ecosystem and its components.⁶ Further in Shushrut Samhita, acharya mentioned that in efforts to protect ones army and land the weaker king introduces various types of poisons in land water and air in the way of a strong king and thus causes deliberate harm to the environment and other living beings including human.

During those days it was the obligation of illustrious vaidhya's to recognize such poisonous condition and purge it and furthermore treat the people influenced by such condition.

The toxic environment can be identified as⁷

As per our Ayurvedic classics, **the toxic water** is having properties like sliminess, intense smell, frothy & having lines in it. Aquatic animals of such water bodies' dies and other birds & animals who consume this water became mad. If any person comes in

contact with such water he will suffer from vomiting, fainting fever etc.

The toxic land can be identified as if any animal or human comes in contact with it he will Suffer from swelling of the affected part, burning sensation & fall of nails & hairs.

The features of toxic air are given as the birds of that area suffers from fainting, & it causes Cough, breathing trouble, headache & eye diseases in human.

To eradicate toxic environment with the help of Ayurveda

The amazing complexity of the psychological, behavioural, cultural and environment problems associated with human health has forced the practitioners to look towards traditional systems of medicine. Preventive measures should be taken to avoid health hazards due to environmental toxins in affected area.

For purification of toxic air –

Lakshaharidradi Yoga is mentioned which have drugs like Laksha, Haridra, Ativisha, Abhaya etc should be burned and its smoke should be spread all over to purify the toxified air & smoke.

If someone gets affected with such type of polluted environment, then *Shobhanjan Mooladi Agad* should be used for treatment.

Yagya therapy is also mentioned in our ancient literature for the purification of toxic environment.

Benefits of yagya therapy⁸ -

- Removal of foul odours-diffusion of substances like thymol, eugenol, terpinol and oil of sandal wood, camphor and clove.
- Removal of bacteria-formaldehyde is a good antiseptic, formic acid & acetic acid is also good disinfectants
- Removal of insects -volatile oil drives away or killed flies, ringworms and dice etc.
- Effects on vegetation – ash is use as fertilizer
- Role of CO₂ produced stimulants for the patients suffering from the ventilation problems and helps treating some of mental disorders.

Water purification methods described in Ayurveda

- Filtration with a thick cloth
- Boiling
- Addition of some drugs to purify water is **tubers of lotus plant, pearls, seeds of katak (strychnos potatorum) and gomedhak (dolomite stone) etc.**
- **Removing its unpleasant odour by adding into it some fragrant flowers like Patala, karveer etc.**
- **Use of Alum**-A lump of alum was mixed with local Indian herbs with name such as *nirmali*,

- *phana, mustaka, ela, ushira and chandan* and baked well in a fire. The resulting material was then dropped into water to purify it.

- **Copper vessels and charcoal**-water was purified by putting it in to copper vessels, exposing it to sunlight and then filtering it using charcoal.
- **Dhavaśvakarnadi Yoga** is mentioned which is prepared by burning the drugs like Dhava, Asvakarna, Asana, Páribhadra, and Pátalá etc. and mixed with water in the quantity of 1 anjali (handful).

Land/Soil pollution Preventions

- **Make people aware about the concept of reduce, recycle and reuse.**
- Reduce the use of pesticides and fertilizers in agriculture.
- Buy biodegradable products.
- Eat organic foods that are grown without pesticides.
- Buy products that have little packaging.
- Don't dump motor oil on the ground.
- Store all liquid chemicals and waste in spill proof containers.

To eradicate the toxic effects of land -

- Sariva is to be churned with Eladi Gana and alcohol and mixed with milk and black soil should be spread over.
- Use of musical instruments covered by anti-toxic drugs powder.

Noise pollution –

- Chanting of *OM* and *Aarti* to reduce harmful effect of noise pollution.

Chanting of *aarti* and *Om* chanting gives better immunity and self-healing power. It improves concentration and helps to focus. The *Om* chanting produces a vibration and sound which is felt through our vocal cords and sinuses. These vibrations open up the sinuses and also clear the airways.

Some useful herbs which is very effective to correct different pollutant Effect –

Liver Function: Amalaki, Bhringaraj

Mental Function: Brahmi, Bacopa

Joints and Muscles: Guggul, Boswellia

Nervous system-Ashwagandha, Brahmi

Immune system – Giloy

Blood purifier – Neem, Manjistha, Guduchi

Blood Glucose control – Gymnema, Bitter melon,

Heart function – Arjun, Bala, Amalki

Digestive – Hing, Ajmoda, Trikatu

Colon health- Triphala

Respiratory System – Ginger, Holy basil, Hridra,

Honey, Black pepper

Elimination of environmental toxin through Ayurvedic procedure**1. Panchakarma Treatment**

•It has now been scientifically shown that a natural purification treatment can successfully eliminate environmentally toxic substances such as polychlorinated biphenyl (PCB's) and pesticides from the body, without any side effects.

•These purification methods are believed to sequentially loosen and remove lipid soluble toxicants from their deposited sites and stimulate their removal.

•A study at the Institute of Science, Technology and Public Policy at Maharishi University of Management in Fairfield, Iowa in collaboration with a special laboratory at Colorado University shows that Panchakarma therapy removed up to 50% of the detectable toxins in the blood.

2. Detoxification through yoga and breathing exercises

Yoga is probably the ideal approach to help us increase our lung capacity, yoga also keeps toxins from entering our body. So do yoga to avoid these toxins from harming our various systems of body.

3. Use of RASAYAN

Drugs, diet and regimens which promote longevity by delaying aging, improving the immune system, process of detoxification and preventing diseases are called Rasayana. So, we can reduce the harmful effect of environmental toxins through the daily use of rasayan herbs (amalki, shatavari, giloy, tulsi, pipalli, kali mirch, haridra etc) or rasayan preparations like amalki rasayan, haridra khand, trifla, panchkol etc.

4. Diet and lifestyle changes⁹

Try to eat organic, unrefined, low sugar foods as much as possible. Avoid all foods that are processed, and try to reduce the consumption of grains products.

Drink at least 2 litres of clean water a day.

You must be sure that your drinking water should be clear from all impurities. In addition, try squeezing a lemon for digestion, flavour, and alkalizing purposes.

CONCLUSION

Today a lot of work is going on to control the emerging conditions of pollution and to save the nature in its original form. Various action plans have been prepared on national and international levels for waste management still the measures are mainly preventive and not curative. Once any component of ecosystem became polluted it has to be purified and detoxified. In Ayurveda we have so many remedies and measures given by our great ancestors to detoxify the poisoned environment. Those remedies if checked for their efficacy for existing conditions and on today's parameters can be proved very helpful in eradication of pollution.

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