

## Environmental Toxicity

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### Abstract

*In recent years, industrial growth & maximum use of pesticides & fertilizers in agricultural field leads to environmental pollution. Intake of food & fruits sprayed by insecticides causes various hazards to human being. Also heavy metals like Hg, As, Pb, etc. are continuously entering the body due to the increased use of pesticides, fertilizers & other industrial products. These metals enter the body through diet, medications & environment. These toxins accumulate in the environment & toxic concentrations are reached. Also these toxins accumulate in the human body & causes serious disorders. Among these disorders Skin diseases are very common. The etiology of these skin diseases suggests that these are due to accumulation of toxins in the human body & so dermatological manifestations are reported. The process of accumulation in the body & clinical manifestations of the environmental toxins are similar to the Doosheevisha. The pathology comes under the concept of Doosheevisha in Ayurveda. Doosheevisha or impoverished or weak poison is a less potent poison when its effects are not nullified radically because of which it resides in the body & that particular less potent part of the poison is called as Doosheevisha.*

*As the environmental toxicity leads to skin disorders, these dermatological manifestations can be treated according to the concept of Doosheevisha in Ayurveda.*

### Introduction

**W**e are living in 21<sup>st</sup> century which is a toxic world. We are exposed to lots of environmental toxins & pollutants in our routine lifestyle. In recent years, industrial growth & maximum use of pesticides & fertilizers in agricultural field leads to environmental pollution. The environmental pollution in current days and also vast changes in lifestyle have lead to gradual accumulation of toxins in the body. These toxins accumulate in the human body & causes serious effects on the body. These accumulated toxins in the body causes potential long term hazards. Our body gets exposed to such toxins through air, water and food. Intake of such food & fruits sprayed by insecticides causes various hazards to human being. These toxins accumulate in the environment & toxic concentrations are reached. All these have serious impact on human being.

Pesticides are the chemically synthesized agents which persist in the environment long time after their administration. Many of these are not

adequately tested for safety. As a result various diseases especially skin diseases are becoming more and more common. These may be due to local toxic effects or toxic effects manifested on skin.

Harmful effects of biological & chemical agents can include various toxins from pollutants, insecticides pesticides & fertilizers. The sources of environmental toxicity can lead to presence of toxins in our food, water & air. Pesticides are a major source of environmental toxicity. More and more new synthetic substances are introduced every day. The heavy metals like Hg, As, Pb, etc. are continuously entering the body due to the increased use of pesticides, fertilizers & other industrial products. These metals enter the body through diet, medications & environment. As the environmental toxicity leads to skin disorders, these dermatological manifestations can be treated according to the concept of *Doosheevisha*.

### Doosheevisha

Ayurveda describes the phenomenon of Doosheevisha. It is unique concept in Ayurveda. The word Doosheevisha is derived from two words

Dooshee and Visha. Dooshee means the one which causes Dushti i.e. which brings pathological imbalance. Dooshee means impure, altered, denatured, attenuated, latent, vitiated, impoverished, slow, and weak and Visha means poison. Visha means any substance that enters in body and vitiates the normal Rasadi Dhatus i.e. basic fundamental tissues.

A poison either Sthavara, Jangama or krutrima, which is old, when ever not fully eliminated from the body and attenuated by anti-poisonous remedies or dried in davagni (forest fire), vata (wind), aatap (the sun) or when the natural qualities of poison becomes less potent it becomes Doosheevisha. Because of its mild potency it does not prove fatal for an individual and is always of slow acting in nature, as it is entangled by kapha, causing the discomfort to the body by residing in the body years together.

A constant exposure to particular time i.e. *bad weather, cloudy and wind day, rainy season, place (Aanup desha, rainy place)*, food (Viruddhaahar, kulattha, pulses, etc) and constant and regular day sleep tends to vitiate dhatus (fundamental root principles) of body and this poison is known as Doosheevisha.

### Environmental Toxicity & Skin diseases

Skin is a one of the major channel through which body excretes toxic and waste material present in the body. In Ayurveda kushthas, kshudra rogas and visarpas are three major groups of diseases that affect the skin. Actually these diseases affect the whole body but manifest themselves on the skin.

The various toxins accumulate in the environment & toxic concentrations are reached. Many pesticides can be absorbed through the skin into the blood, and can cause toxic effects. Also these toxins accumulate in the human body & causes serious disorders. Among these disorders *Skin diseases* are very common. The etiology of these skin diseases suggests that these are due to accumulation of toxins in the human body & so dermatological manifestations are reported. The process of accumulation in the body & clinical manifestations of the environmental toxins are similar to the *Doosheevisha*. The pathology comes under the concept of *Doosheevisha* in Ayurveda. *Doosheevisha* or impoverished or weak poison is a less potent

poison when its effects are not nullified radically because of which it resides in the body & that particular less potent part of the poison is called as *Doosheevisha*. Because of its mild potency it does not prove fatal for an individual but it resides in the body and vitiates the body and its functions when favourable conditions occur. It is very difficult to say the exact terminology in terms of modern science. Ayurveda has accorded high priority to toxicity especially impoverished, latent poisons i.e. *Doosheevisha*.

As per Ayurveda, constant exposure to particular time i.e. *bad weather* which can be considered as environmental toxicity tends to vitiate dhatus (fundamental root principles) of body and this poison is known as *Doosheevisha*.

### Doosheevisha & Skin Diseases

While diagnosing skin disorders Ayurveda considers *Doosheevisha* as an etiological factor. This is especially true when there is no obvious cause. As skin is one of the major excretory channels, it would be a main source for *Doosheevishjanya vikara*. Due to recurrence & chronic nature of many skin diseases its treatment is not so easy. Many drugs are used to get relief from many skin diseases but they have limited results while Agad Tantra specialists of Ayurveda are handling many of the skin diseases caused by *Doosheevisha* by using *Doosheevishghna yoga*.

At present polluted air, water, land, the increased exposure environmental toxins can act as cause for *Doosheevisha*. As a result *Doosheevishjanya twak vikaras* are becoming more and more common. Symptoms of concerned Dhatus *dushti* is seen where *Doosheevisha* is deposited. *Kushtha* (skin diseases) is a clinical entity which is seen when *Doosheevisha* is deposited in Rakta dhatu along with *twak* (skin).

### Summary

*Doosheevisha* is unique concept in Ayurveda. It is very low potent poisonous substance which resides in the body and vitiates dhatus when favourable condition occurs. In today's era due to Industrialization and inappropriate use of fertilizers, pesticides, insecticides & other chemicals have led to gradual accumulation of toxins in the body which cause serious effects on human body. Our body gets

exposed to such Doosheevisha through air, water and food. Skin is the largest organ of the body. Its exposure to Doosheevisha results in various types of skin diseases. These may be due to local toxic effects or systemic toxic effects manifested on skin. Skin is a one of the major channel through which body excretes waste and toxic materials from body. So skin would be the main source for dooshivishjanya diseases. While diagnosing skin disorders Ayurveda considers Doosheevisha as an etiological factor.

In modern science treatment of many skin diseases is not very satisfactory, has less options available and recurrence is common. Modern medicines give only temporary and symptomatic relief to most of them and there are many side effects in their long term use. The pathology of skin diseases due to environmental cumulative toxins comes under the concept of *Doosheevisha* in Ayurveda. As the environmental toxicity leads to skin disorders, these dermatological manifestations can be treated according to the concept of *Doosheevisha*.

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