



**CUMULATIVE POISONS & ITS MANAGEMENT WITH SPECIAL REFERENCE TO *DUSHI VISHA***

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**ABSTRACT**

Bio-accumulation is the buildup of substances within the body. This is a necessary process for nutrients within the body like vitamins, minerals, and amino acids. On occasion, some harmful substances enter the body and bio-accumulate. These are cumulative Poisons, not immediately eliminated from the body. They tend to bio-accumulate in the system and can produce symptoms of chronic poisoning. Most of these substances are found in the Environment, or come from the food that we eat or water we drink. Now A day the sources of poisons are not limited, as in the days of classics. Generally, human beings are exposed to different poisons via ingestion (drinking or eating) & inhalation (breathing). In recent years, the burden of chronic toxin accumulation as a cumulative poison in form of *Dushi visha* has become clearer & more disturbing. *Dushi Visha* like cumulative poison is slow acting poison, which have not been fully eliminated from the system. It is retained in the tissues of living beings for a number of years; it contaminates the tissues, and is therefore called *Dushi visha*. Bio-accumulation of these cumulative poisons causes diseases in living beings. A patient afflicted with the cumulative poisons should be first take careful history & then proper clinical examination we manage it using principles of *Ayurveda* i.e. *Nidana Parivarjan* / Preventive measure , Bio-purification & using supplementary medication in form of *Agad* as mention in our classical text.

**KEYWORDS:** *Dushi Visha*, Cumulative Poison, Bio-purification.

**INTRODUCTION**

Bio-accumulation is the buildup of substances within the body. This is a necessary process for nutrients within the body like vitamins, minerals, and amino acids. On occasion, some harmful substances enter the body and bio-accumulate. These are cumulative poisons, not immediately eliminated from the body. They tend to bio-accumulate in the system and can produce symptoms of chronic poisoning. Most of these substances are found in the Environment, or come from the food that we eat or water we drink. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than at which the substance is lost by catabolism and excretion. Where it accumulates in the body depends on the type of substance.

Many bio - accumulative substances are fat soluble so that they tend to reside primarily in fat deposits or in fatty substances in blood, many bio-accumulative substances may also be deposited elsewhere, including liver, kidney, heart, bone, muscle, or the brain. Every time when fat is broken down in the body these toxins are released and make the individual sick. The biggest health concerns for these substances are that the body is not able to efficiently break down and remove these toxins from the body. It causes them to build up over time and reaches to toxic levels that result in poisoning.

**Aim and Objectives**

1. To evaluate the Bio-accumulative Poisons with special reference to *Dushi Visha* and Its toxicity in human being.
2. To establish the complete protocol of *Ayurvedic* management of Bio - accumulative Poisons.

**MATERIALS AND METHOD**

This paper is based on text book of *Ayurveda* along with Modern text books and various websites to collect information on the relevant topics.

**Effects of Bio-Accumulative Poisons on Human Health**

Health emerges from a highly complex interaction between factors intrinsic to the human and his or her environment. Many factors within the environment influences health, including aspects of the physical environment, biological environment, built environment and social environment, environmental changes affect many physiological system and do not respect boundaries.<sup>1</sup>

Now a day the sources of poisons are not limited, as in the days of classics. Humans are constantly exposed to potentially toxic environmental chemicals through food in form of heavy metals and pesticides, environmental pollution of the air, water, occupational hazards and social poisons such as tobacco, smoking, alcohol and drugs of misuse, also need to be considered<sup>2</sup>. There are thousands of toxins that enter in our body on a continuous daily exposure to harmful chemicals. Human body cannot get rid of these toxins as most of these toxins are fat soluble and human body have limited excretory capacity. It is true that our body has natural detoxification systems like Kidneys, Liver, Colon, Lung, Skin etc. But the human body was designed in such a way that it cope up with low level of toxins that existed in the environment thousands years back, when such type of toxic exposure not present. This results in cumulative accumulation of different toxins in

various body parts creating serious health problems including cancer.

This accumulated toxin slowly affects vital functions and our immunity resulting in disease. In recent years, the burdens of chronic toxin accumulation as a cumulative poison in form of *Dushi Visha* become clearer and more disturbing. *Dushi Visha* is slow acting poison, being covered over with *Kapha-Dosha* of the body and is retained in the system for a number of years.<sup>3</sup>

Poisons, whether inanimate, animate or artificial, which have not been fully eliminated from the system<sup>4</sup> or neutralized due to various reasons, remains in the body and gets manifested in the form of various diseases. As this type of poison itself gets constantly polluted on account of various factors like geographical conditions, time, diet and day sleeping. It contaminates the tissues and is therefore called *Dushi visha*<sup>5</sup>.

### Signs and Symptoms of *Dushi Visha* Poisoning

A Person afflicted with *Dushi visha* i.e. cumulative poison develops indigestion, aversion of food, anorexia, eruption of circular patches, urticarial rashes on the skin, stupor(mental confusion), loss of essential constituents of the body (*Dhatu-ksaya*), swelling of the feet, hands and face, ascites, vomiting, diarrhoea, discoloration of the skin, fainting, intermittent pyrexia and excessively increased thirst.<sup>6</sup>

Some of the poisons produce insanity; some of them cause obstipation, some of cause loss of semen, while others lead to blurred speech, leprosy (*Kustha*) and various other diseases.<sup>7</sup> Complications like pyrexia, burning sensation, hiccough, obstipation, azospermia, oedema, diarrhea, fainting, heart disease, abdominal enlargement, insanity, tremor and other complications may develop.<sup>8</sup>

Above clinical features of *Dushi visha* shows that *Rasavaha*, *Raktavaha*, *Annava*, *Purishvaha*, *Udakavaha*, *Swedavaha*, *Majjavaha*, *Shukravaha*, *Manovaha* *Shrotas* mainly involved in *Dushi visha* (cumulative poison). *Rasa*, *Rakta*, *Meda*, *Majja*, *Shukra Dhatu* and *Oja* specially polluted. In Modern System Digestive, Excretory, Reproductive, Neurological and Immune system most affected.

### Management

Disease produced due to *Dushi visha* (bio-accumulative poison) can be treated with the help of applying *Ayurvedic* principle, it includes:

1. **Nidana-parivarjana:** Elimination of the cause of the disease. Find out factors which are responsible for cumulative toxicity and eliminate it.
2. **Bio- purification through *Panchakarma* therapy:** It is a type of Detoxification therapy. The *Panchakarma* (detoxification) process contains three steps.<sup>9</sup>
  - (i) ***Purva karma:*** Preparations which have to be done before the detoxification.
  - (ii) ***Pradhana karma:*** The main detoxification process. It includes *Vamana*, *Virechana*, *Basti*, *Nasya* and *Raktamokshana Karma*.<sup>10</sup>
  - (iii) ***Pashchat karma:*** After bio – purification Agni and strength of the body becomes weak. So to restore the

strength of Agni and body Rehabilitation and special dietetic regimen is advised<sup>11</sup>.

*Panchakarma* is an effective procedure to encounter the disease as well as to eliminate the accumulated toxic materials from the body to maintain a healthy state. This Bio - purification therapy generally take place at two level<sup>12</sup>.

- A. Transmembrane visceral purification of the body through *Pradhana karma* like *Vamana*, *Virechana*, *Vasti*.
- B. Transdermal purification of the body through *Bahya parimarjana* Procedure of *Snehana*, *Swedana*, *Abhyanga* .

Bio – Purification (Detoxification) may remove cumulative toxins from the tissues, visceral organs; cleanse the macro and micro – channels of the biological system. It is essential to permit free flow of nutrients; energies and it restore the natural body functions<sup>13</sup>. It has now been scientifically shown that a natural bio purification treatment can successfully eliminate environmentally toxic substances such as polychlorinated biphenyl (PCB' s) and pesticides from the body, without damaging side effects<sup>14</sup>. 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 demonstrated that classical *Panchkarma* treatment eliminated up to 50% of the detectable toxins in the blood<sup>15</sup>.

**3. Supplementary Medication:** *Rasayana chikitsa*, *Ajeya Ghrita* use as Antidote<sup>16</sup>, *Dushi Vishari Agada*<sup>17</sup>, medication in form of *Agada* as mention in our classical text can be used in Bio- accumulative poison.

### CONCLUSION

In the current era, human beings is more exposed to acute and chronic poisoning, pesticides, chemical preservatives, coloring agents, flavoring agents etc. Modern medical science is quite successful in diagnosing and treating acute poisoning cases as an availability of well equipped emergency medical services. The *Ayurvedic* approach to the treatment may useful in providing the complete cure of the diseases arise due to Bio-accumulative poisons. Bio-purification (Detoxification) makes the biological system to return to normalcy and to rejuvenate rapidly and also facilitates the desired pharmacokinetic effect of therapeutic remedies administered thereafter. It eliminates accumulated toxins and stagnated excreta and metabolites from the body, cleanses the macro and micro channels of the body. It will be also helpful in preventing the accumulation of fresh toxins in the body.

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**Cite this article as:**

Mishra Awadh Kishor, Sharma Anita, Porte Sharad M., Khatik Rohit. Cumulative Poisons & its Management with Special Reference to Dushi Visha. International Journal of Ayurveda and Pharma Research. 2016;4(3):42-44.

**Source of support: Nil, Conflict of interest: None Declared**

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