

**HOUSEHOLD POISON: AN UNINTENTIONAL POISON**

Negi Deepti<sup>\*1</sup>, Singh Anoop Kumar<sup>2</sup>, Tiwari R. C.<sup>3</sup>, Dikshit Manisha<sup>4</sup>, and Sharma Ved Bhushan<sup>5</sup> and  
Painuly  
J. K.<sup>6</sup>

<sup>1</sup>MD. Scholar at UAU in *Agadtantra*, Rishikul Parisar Haridwar.

<sup>2,4</sup>Associate Professor at UAU in *Agadtantra*, Rishikul Parisar Haridwar.

<sup>3</sup>Professor and H.O.D at UAU in *Agadtantra*, Rishikul Parisar Haridwar.

<sup>5</sup>Assistant Professor at UAU in *Agadtantra*, Rishikul Parisar Haridwar.

<sup>6</sup>Associate Professor at UAU in *Dravyaguna*, Gurukul Parisar, Haridwar.

**\*Corresponding Author: Dr. Negi Deepti**

MD. Scholar at UAU in *Agadtantra*, Rishikul Parisar Haridwar.

Article Received on 23/01/2020

Article Revised on 13/02/2020

Article Accepted on 04/03/2020

**ABSTRACT**

As population is increasing the requirements are also being increased. We are using so many things according to our convenience for cleaning the home or keeping safe from pests. But we should also know about these chemicals (poisons) which we are using in our daily life, intentionally or unintentionally. It is so important to be aware of the potential poisons currently present at home. The unintentional poison in daily use may be conveniently dealt within these groups, those are domestic/ house hold poisons, poisoning by medicine and garden poisons. Things those are most accessible to people, such as cosmetics and personal care products, cleaning products, analgesics, and cough and cold medicines, are responsible for the majority of unintentional exposures and poisonings at the present time. As requirement is increasing the poisonous substance is also noticed in dietary supplements. Household poisons are not only acute poisons but also the chronic one. Long time of exposure of cosmetics, preservatives, fertilizers, and pesticides cause chronic poisoning as they contain heavy metals like lead, mercury etc. This article deal with various house hold poison, sign symptoms and their basic treatment.

**KEYWORDS:** Population, chemicals, household poison, cosmetics, preservatives, heavy metals.

**INTRODUCTION**

Household poisons are the products we use in our daily lives, but they do intentionally or unintentionally cause poisoning. Writing poison with a sign on the rapper of any house hold substance isn't enough, these are unintended poison. We need to gain some knowledge of their potential because we can't eliminate their use from our lives. They may be safe when used as directed, even if they are dangerous. Products that are most accessible to humans, such as cosmetics and personal care products, cleaning products, analgesics and cough and cold medicines, are responsible for most unintended exposures and poisonings in the developed world. There are following groups in house hold poison.

**1- Domestic or house hold poison-** some of the common domestic poisons , discussed here under two heads:

- Hydrocarbons
- Other than hydrocarbons

**Hydrocarbons<sup>[1]</sup>** – Hydrocarbons are broad group of organic compounds that contain a carbon and hydrogen only. They are of three varieties:

- Aliphatic (straight chain)
- Aromatic (containing a benzene ring)
- Halogenated hydrocarbons

**Other than hydrocarbons- In this group there are following compounds**

**Cosmetics<sup>[2]</sup>**

**I. Cuticle remover-** The ingredients in cuticle remover that can be harmful are Potassium hydroxide, Sodium hydroxide. Cuticle remover is a liquid or cream used to remove dead tissue around the nails. Cuticle remover poisoning occurs when someone swallows this substance.<sup>[3]</sup> This poisoning is mostly accidental.

**II. Depilatories-** A chemical depilatory is a cosmetic preparation used to remove hair from the skin.<sup>[4]</sup> They contain various chemicals such as barium sulphate, thallium<sup>[5]</sup>, which can cause serious symptoms if sufficient quantities are ingested.

**III. Hair wave lotion** – Hair wave lotion is a hair care product used to create permanent waves. The poisoning occurs from swallowing, breathing in, or touching the lotion. Lotion contains harmful

chemical are thioglycollate salts, perborates, bromates.<sup>[6]</sup>

**IV. Nail polish removers-** Nail polish remover is one of the most common sources of concentrated acetone, which may be inhaled or swallowed to produce effects similar to alcohol intoxication.<sup>[7]</sup>

**V. Baby powder-** boric acid

#### Kitchen<sup>[8]</sup>

**I- Baking powder-** Tartaric acid 50%

**II- Baking soda-** Sodium bicarbonate

**III- Dish washing compounds-** sodium polyphosphates,

**IV- Fire extinguishing fluid-** Carbon tetrachloride, sodium carbonate, sodium silicates

**V- Matches-** Antimony, Phosphorus, sesqui-sulphide, potassium chlorate.

11% cleaning substances are responsible for poisoning.<sup>[9]</sup>

#### Rat poisons

**I. Rat paste-** Aluminium Phosphide, Zinc sulphide, zinc phosphide, arsenious oxide, red squill, thallium sulphate, phosphorus, barium carbonate, strychnine, norbromide, warfarin, sodium fluoroacetate.

**II. Rodine-** yellow phosphorus

**Roach powder-** Sodium fluoride.

#### Sanitary

**I. Deodorant tablets-** formaldehyde, naphthalene

**II. Drain cleaners-** Sodium hydroxide.

**III. Disinfectants-** Phenol, bleaching powder (calcium hydrochlorite)

#### Miscellaneous

**I. Insecticide spray-** D.D.T., Gammexane, etc

**II. Moth balls-** Naphthalene.

**III. Marking ink-** Aniline

**IV. Ink remover-** Sodium hypochlorite 5%

**V. Anti-rust products-** Ammonium sulphide, hydrofluoric acid, naphtha, oxalic acid.

**VI. Cleaning solvents-** Petroleum hydrocarbons, carbon tetrachloride, and trichloroethylene.

**VII. Fluorescent lamp-** beryllium

**VIII. Furniture polish-** turpentine, petroleum hydrocarbons.

**IX. Paint remover-** sodium hydroxide, lead acetate.

**X. Shoe polish-** Aniline, nitrobenzene.

**XI. Hair bleach-** potassium permanganate, hydrogen peroxide.

**XII. Toys (paints)-** lead.

**XIII. Fireworks-** Arsenic, mercury, antimony, lead, phosphorus, thiocyanate.

**XIV. Crayons (chalk)-** salts of arsenic, copper, lead.

**XV. Crayons (wax)-** para-nitroaniline.

#### 2- Garden poisons<sup>[10]</sup>

**I. Insecticides-** Organophosphorus compounds, Chlorinated hydrocarbons, Nicotine, tar oils.

**II. Fungicides-** Lead arsenate, copper compound, organic mercurial, lime, sulphur.

**III. Weed- killers-** Sodium Chlorate, arsenious oxide, and arsenites, dinitrocresol, paraquat.

Suicide poisoning is common with household poisoning, accidental poisoning may occur in children.<sup>[11]</sup>

#### 3- Therapeutic poisons

**I- Antiseptics-** Iodine, Benzoin.

**II- Tonic Tablets-** Iron.

**III- Tonic syrup-** Strychnine

**IV- Sleeping tablets-** Barbiturates.

**V- Headache Tables-** Aspirin.

**VI- Cough remedies-** Codeine

**VII- Throat tablets-** Potassium Chlorate

**VIII- Pep tablets-** Benzedrine.

**IX- Others-** Antidepressants, tranquillisers.<sup>[12]</sup>

All of the above described poisons are very common in our home and are widely used. Very few poisons are used intentionally for suicide and homicide otherwise we are using them unintentionally as a poison.

#### SIGN AND SYMPTOMS

The symptoms caused by these house hold poisons, may occur immediately or appear several days later, and even months. Signs and symptoms of house hold poisoning are so wide and variable but here we are describing some common sign and symptoms of the poisoning.

Nausea, Vomiting, Diarrhea, pain, Coma, Tachypnea, Seizures, Confusion, Delirium<sup>[13]</sup>, Skin rashes, sometime redness and sometime blister formation, Heaviness in the epigastric region, turning into nausea, Digestive disorders: indigestion, flatulence, diarrhea or constipation, Pain and spasms of different body parts, usually in the lower abdomen, Headache, turning into migraine, Sore throat, The bitter taste in your mouth that indicates abnormal function of the liver.<sup>[14]</sup> Dizziness, Weakness, Weight loss, Anaemia, Nervousness, Pain in limbs, Peripheral numbness, Paraesthesias.

#### Treatment (first aid)

- Wash the contaminated skin with copious amount of water and soap.
- Activated charcoal in large doses is recommended, though petroleum distillers are not adsorbed.
- Saline purgatives may also be useful.
- Gastric lavage (sometimes avoided)
- Avoid intravenous fluid overload, as it may precipitate pulmonary oedema.<sup>[15]</sup>
- In case of chronic poisoning – isolate and prevent further absorption of poison.

#### CONCLUSION

The objective of this review article is to provide knowledge about households poisons which often comes in contact of children and elderly people. Cosmetics are widely available and are not packed in child-resistant containers, thus leading to accidental ingestion. In general, it is difficult to evaluate hazards of accidental ingestions of cosmetics and liquid household products

because the majority of accidental ingestions are harmless at the time of consumption but later on they may exhibit poisonous effects. As per an article the major route of exposure is oral and mainly in liquid form for babies (less than 3 years of age) and solid products for elder children (older than 13 years). Children of the age group 4 to 12 years are exposed to both liquid and solid household poisons.<sup>[16]</sup> 12.6% exposure of in house poison shown due to cosmetics and personal care product in children taken accidentally.<sup>[17]</sup> Our lack of knowledge of these household poisons is causing trouble in our society. There should be regular awareness-raising activities and the importance of preventive measures. These activities can reduce the incidence of unintentional poisoning with household poisons.

## REFERENCES

1. Nagesh G.Rao, text book of forensic medicine and toxicology, 2nd Edition, jaypee brothers medical publisher (p) Ltd 2010 page no 555.
2. Dr. k.s. Narayan reddy, the essentials of forensic medicine toxicology, 34<sup>th</sup> edition, jaypee- highlights Medical publishers inc.2017 page no.-468.
3. <https://www.baptistjax.com/health-library/poison/cuticle-remover-poisoning>
4. [https://en.wikipedia.org/wiki/Chemical\\_depilatory](https://en.wikipedia.org/wiki/Chemical_depilatory)
5. Dr. k.s. Narayan reddy, the essentials of forensic medicine toxicology, 34<sup>th</sup> edition, jaypee- highlights Medical publishers inc.2017 page no.-468.
6. Dr. k.s. Narayan reddy, the essentials of forensic medicine toxicology, 34<sup>th</sup> edition, jaypee- highlights Medical publishers inc. 2017 page no.-468.
7. Dr. Ted Bender, Ph.D., LCDC, Medically reviewed, Acetone Poisoning—The Dangers Of Drinking Nail Polish Remover, April 22, 2019.
8. Dr. k.s. Narayan reddy, the essentials of forensic medicine toxicology, 34<sup>th</sup> edition, jaypee- highlights Medical publishers inc. 2017 page no.-468.
9. <https://www.poison.org/poison-statistics-national>
10. Nagesh G.Rao, text book of forensic medicine and toxicology, 2<sup>nd</sup> Edition, jaypee brothers medical publisher (p) Ltd 2010 page no 558.
11. Rajesh bardale, principles of forensic medicine and toxicology, 2<sup>nd</sup> edition, jaypee brothers medical publisher(p) ltd, 2017, page no.559.
12. Dr. k.s. Narayan reddy, the essentials of forensic medicine toxicology, 34<sup>th</sup> edition, jaypee- highlights Medical publishers inc. 2017 page no.-468.
13. <https://www.rightdiagnosis.com/p/poisoning/symptoms.htm>
14. <http://medicalj-center.info/poisoning/poisoning-by-household-chemicals-signs-consequences.html>
15. Nagesh G.Rao, text book of forensic medicine and toxicology, 2<sup>nd</sup> Edition, jaypee brothers medical publisher (p) Ltd 2010 page no 556.
16. [https://ec.europa.eu/health/scientific\\_committees/opinions\\_layman/products-resembling-food/en/1-3/1-accidental-poisoning-household-products.htm](https://ec.europa.eu/health/scientific_committees/opinions_layman/products-resembling-food/en/1-3/1-accidental-poisoning-household-products.htm)
17. <https://www.poison.org/poison-statistics-national>