



# **Caribbean Poison Information Network (CARPIN)**

## **Information for Nurses**

**Presentations during**

# **Poison Prevention Week 2006**

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## **Definitions of a Poison**

1. A substance that when introduced into or absorbed by a living organism may destroy life or injure health.  
([www.cogsci.princeton.edu/cgi-bin/webwn](http://www.cogsci.princeton.edu/cgi-bin/webwn))
2. “All substances are poisons; there is none that is not a poison. The right dose differentiates the poison from a remedy”  
(Paracelsus)

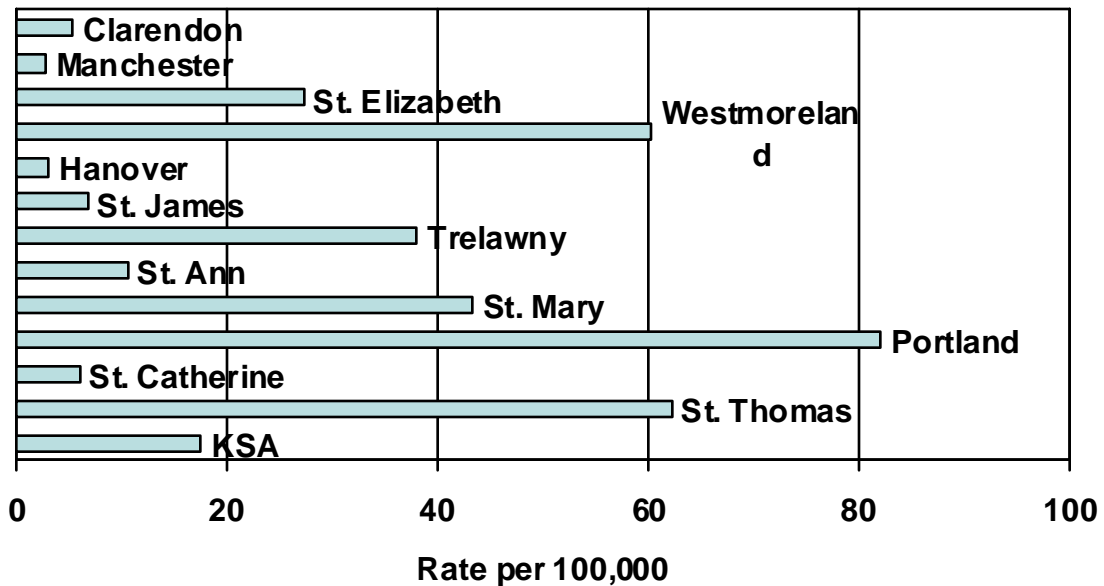
## **Accidental Poisoning**

- 1 Any poisoning considered to have occurred by accident  
(unintentionally)
- 2 Accidental Poisoning was added to the list of Class 1 notifiable diseases in Jamaica, 1997. Therefore it is important to document its epidemiological description on a national level. (MOH)
- 3 Acute poisoning is a common medical emergency.
- 4 Events are under-reported in the Caribbean.
- 5 Poison Centers facilitate documentation, generation of reports and institution of poison prevention measures.
- 6 When data from parts of the Caribbean was compared with data from USA, the age pattern for poison cases was similar. (Bushay, October 30th 2005)

## Statistical Data

- 1 USA est. 5 million cases per annum ,51.6% < 6 years old
- 2 Canada > 200,000 reported cases p.a., >50% involve children < 5 years old (y o)
- 3 WHO 50% of cases of pesticide poisonings occur in developing countries (use is only 15% of world demand). Brown-Myrie 2004
- 4 Barbados > 50% of documented cases <5y o
- 5 Surinam est. 82% of documented cases, < 5 year old
- 6 Trinidad & Tobago >23% of documented cases < 5 year old
- 7 Jamaica 80 % of cases <5 y o (2004), 85% of cases < 5 y o (2005 Jan.-Sept.)
- 8 Bleach 50%, Kerosene 13%, Pesticide 13%,
- 9 Pharmaceuticals 12% ...MOH Surveillance Unit

## Accidental Poisoning by parish 2003



## **Poisons and Children**

- 1 Children are the main victims of poison incidents in Jamaica and many other countries as can be seen from the epidemiological data.
- 2 Most of the accidental cases of poisonings in children occur in the home. In 2004, eighty- five (85%) of the reported cases of poisonings in Jamaica were children while in the United States, children accounted for seventy- one percent (71%).
- 3 More than fifty percent (50%) of the documented cases in Barbados were children less than five years old while in East Surinam it was eighty-two percent (82%).

## **Poison Prevention in the Home and its Environs**

There are various household substances that can be poisonous.

These include:

- 1 Cleaning and washing products such as bleach, which can be harmful in small amounts.
- 2 Medicines, which may be safe at the recommended dose, but poisonous if taken in overdoses.
- 3 Other household chemicals, such as plant food, paints, solvents, firelighters, etc.
- 4 Some toiletries such as hair dyes and other hair treatments
- 5 Petrol and kerosene
- 6 Some foods and plants e.g. Barracuda and Oleander

<u>Category of Poisonous Substances</u>	<u>Location</u>	<u>Examples</u>
COSMETICS	BEDROOM, BATHROOM, MOTOR VEHICLE	Perfumes, nail polish, acetone
MEDICATIONS	BEDROOM, BATHROOM, MOTOR VEHICLE	Vitamins, OTC Drugs and Prescription Drugs.
CLEANING AGENTS	KITCHEN, BATHROOM LIVING ROOM	Bleach, Dishwashing liquid
PLANTS	YARD FLOWER POTS THE FIELD	Periwinkle, Oleander, unripe Ackee
PESTICIDE	GARAGE KITCHEN LAUNDRY ROOM	Gasoline, Kerosene, Antifreeze
PETROLEUM PRODUCTS	GARAGE KITCHEN LAUNDRY ROOM	Gasoline, Kerosene, Antifreeze
PAINT PRODUCTS	GARAGE KITCHEN LAUNDRY ROOM	Gasoline, Kerosene, Antifreeze
HERBICIDES	GARAGE KITCHEN LAUNDRY ROOM	Gasoline, Kerosene, Antifreeze
RODENTICIDES	GARAGE KITCHEN LAUNDRY ROOM	Gasoline, Kerosene, Antifreeze

## **Examples of those agents that could be poisonous and their location in the home**

### **Common Agents/Products causing poisonings**

#### **(In Jamaica and other Caribbean Countries)**

- 1 Bleach is the most common substance in Jamaica
- 2 Kerosene
- 3 Pharmaceuticals e.g. analgesics, psychoactive drugs, benzodiazepines
- 4 Pesticides and herbicides.
- 5 Other Household chemicals such as floor polish, disinfectants, caustic soda and air fresheners.
- 6 Other solvents e.g. thinner and acetone
- 7 Others including: personal care products, car/ engine products, adhesives, sulphur, recreational drugs, lead, battery acid, flower seeds and organic phosphate.
- 8 Food poisonings e.g. ciguatera toxin

*NB: The agents are listed in order of most common too least common in descending order.*

### **What can happen if someone gets poisoned?**

In some cases the effects are minimal and no medical follow-up may be required. However in many poisoning situations major effects and even death will occur. Some of these major effects include liver failure, kidney failure and respiratory failure.

## **Symptoms of Poisonings**

Different poisons affect the body differently: they can take effect quickly. The range of symptoms is very broad. If someone becomes very ill without an apparent reason, poisoning should be considered and a possible cause.

Common symptoms of poisonings can include:

- 1 Abdominal pain, vomiting, diarrhea, or nausea
- 2 Dizziness, weakness or drowsiness
- 3 Fever
- 4 Chills (shivering)
- 5 Loss of appetite
- 6 Headache or irritability
- 7 Pain on swallowing or production of more saliva than usual
- 8 Skin rash
- 9 Burns around the nose or mouth
- 10 Double or blurred vision
- 11 Seizures (fits)
- 1 Unconsciousness

## **What should be done to prevent poisonings?**

- 2 Increasing public awareness and education
- 3 Keep all hazardous material and drugs in locked cupboards and out of reach of children.
- 4 Ensure safety latches and drawers are placed on cupboards where potential poisons may be stored.
- 5 Store all medicine and household chemicals in their original containers with proper labels.

- 6 When possible buy products in child-resistant packaging.
- 7 Read carefully the labels on different products that can be potential poisons
- 8 Never refer to a drug as candy to children.
- 9 Do not store food and chemicals in the same cupboard.
- 10 Never store dangerous products in everyday containers such as milk bottles, soda bottles or drinking glasses.
- 11 Check the garden for poisonous plants or berries and remove them.
- 12 Teach children to always ask before eating or drinking anything.
- 1 Always keep a keen eye on children and always have the Poison Center number handy in case of accidental poisonings.

### **What do I do if someone is poisoned?**

Remember poisonings can be a life-threatening situation; however the following are some immediate measure you can take in the event that poisoning occurs:

If you suspect someone has swallowed a poisonous substance try to identify the substance so as to help the medical staff give appropriate treatment quickly.

If it is safe to so, immediately remove the person form the source of exposure and if possible remove the substance from the person (e.g. removing clothing).

- 2 Immediately go to the nearest medical facility
- 3 Be prepared to supply the following information to a medical professional or the member of the medical staff:

- 4 The name of the substance swallowed; if possible, keep the container and a note of how much has been consumed.
- 5 The person's age and estimated weight.
- 6 The estimated time that the poison was swallowed
- 7 Whether or not the person has vomited
- 1 Whether the person suffers from any chronic illness.

**If you suspect that someone has inhaled poisonous fumes, you need to first assess the situation and your risk, then you can follow these guidelines:**

- 2 If possible, remove the person from the contaminated area.
- 3 Avoid inhaling fumes yourself by taking deep breaths before entering the area and holding your breath until you are clear of the area.
- 4 Once out of the area of exposure, check to see if the person's airway is clear and if he/she is breathing.
- 5 If the person is not breathing, begin CPR ONLY if you know how to do so.
- 6 Call for assistance and immediately take the person to the nearest medical facility.
- 1 Call the Poison Center at 1-888-POISONS for additional information.

# Categories of Poisons

## Medicinal Poisons

### 1. *Analgesics/ Antipyretics* (Aspirin and Paracetamol)

#### ➤ Signs and symptoms:

Aspirin: hyperthermia, hypertension, hyperventilation, respiratory alkalosis, metabolic acidosis

Paracetamol: liver damage.

### 1. *Psychotropic Agents* (Sedatives, Hypnotics, Antidepressants and Narcotics)

#### ➤ Signs and Symptoms:

Confusion, delirium, apnea, hallucinations, Haloperidol: deep sleep, hyperthermia, Parkinsonism

### 2. *Others*

#### ➤ Signs and Symptoms:

Aminoglycosides: ototoxicity, nephrotoxicity; Digoxin: hyperkalemia, tachycardia, hypotension; Lithium: sedation, liver failure, seizures; Theophylline: nausea, leg cramps, tachycardia Iron: fever, hematuria, hyperventilation

## **Agricultural Poisons**

### 1. *Pesticides* (Malathion and Dieldrin)

#### ➤ **Signs and Symptoms:**

Parathion: myosis, excessive tearing and sweating, nausea, vomiting and abdominal pain

### 1. *Herbicides* (Paraquat)

#### ➤ **Signs and Symptoms:**

Paraquat: nausea, vomiting, diarrhea, cardiac, respiratory, renal and hepatic failure.

## **Environmental/ Industrial Poisons**

### 1. *Toxic Gases* (Carbon Monoxide, Chlorine, Ozone, Sulphur Dioxide and Cyanide)

### 2. *Corrosives* (Acids, Lye, Lime)

### 3. *Metallic Poisons* (Lead, Mercury, Arsenic, Cadmium)

### 4. *Others* (Lead Tetraethyl, Asbestos)

## **Household Poisons**

### 1. *Petroleum Distillates* (Kerosene)

### 2. *Naphthalene* (Moth Balls)

### 3. *Bleach*

### 4. *Insecticides*

### 5. *Rodenticides*

### 6. *Disinfectants*

### 7. *Toxic Alcohols* (Methanol, Ethylene, Ethylene glycol)

## **Natural poisons**

1. *Animals* (scorpions, snake, fish, rats)
2. *Plants* (mushrooms, unripe Ackee, bitter cassava, poison ivy, periwinkle)
3. *Microbials* (*Salmonella*, *Clostridium*, *E. coli*, *Leptospira*)

## **Physical Forms of Poisons**

### **Solid**

- *Medicines* e.g. pills
- *Plants*
- *Powders* (like laundry detergent)
- *Granular* (Pesticides and Fertilizers)

### **Liquid**

- *Liquid Laundry Soap*
- *Furniture Polish*
- *Lighter Fluid*
- *Lotion*
- *Liquid Medication* (These may be thick or thin)

***Pay special attention to liquids as large quantities may be swallowed in a short period of time and they may be absorbed rapidly.***

### **Sprays**

- *Insecticides*
- *Spray Paints*
- *Cleaning products*
- *Aerosol sprays may be flammable, explode and cause damage to the heart and lungs if inhaled.*

## **“Invisible”**

- *Dust*
- *Smoke*
- *Mist*

## **Gases or Vapors**

(Carbon monoxide from hot water heaters and furnaces, exhaust fumes from automobiles, fumes from gas and oil burning stoves and industrial pollution in the air)

**Common Household Poisons and their effects on children under five years old**

<b>Category</b>	<b>Effects</b>
Plant Poisons	Allergy e.g. rash, swelling and redness
Kerosene	Respiratory e.g. choking, shortness of breath, wheezing, chest tightness
Cosmetics	Respiratory and Liver Damage e.g. jaundice, upper abdominal pain and swelling
Pesticides/ Herbicides	Respiratory and Liver Damage
Animal Poisons	Excessive bleeding and Liver Damage
Used Car Battery	Brain Damage eg. convulsions (fits) and headache; and GI tract Damage
Alcohol	Brain and GI Damage
Bleach Cleaner	GI Tract and Liver Damage
Pharmacy Drugs	Liver and Brain Damage
Insecticides	Heart eg. heart palpitations, and Nerve Damage

# **POISON PREVENTION TIPS TO KEEP CHILDREN**

## **SAFE**

Children under six years old are at the greatest risk for accidental poisoning. They are curious by nature and investigate their world by putting many things in their mouths. They will eat or drink anything regardless of the taste. Children are drawn to the attractive packaging, good smell and colorful substances of most products found in the home.

### **Household and Chemical Products**

- 2 Use safety locks on all cabinets, cupboards, and containers.
- 3 Store all potential poisonous household and chemical products out of sight and reach of children.
- 4 If you are using a product and need to answer the telephone or door, take the child with you. (Most poisonings are said to occur when the product is in use.)
- 5 Store all products in their original, labeled containers.
  - 1 Food containers such as cups, baby's bottle, soda bottles, and water and milk jugs should not be used to store household cleaners and chemical products.
  - 2 Store food and household and chemical products in separate areas. Mistaken identity could cause a serious poisoning. Many poisonous products look-a-like and come in containers similar to drinks or food.
  - 3 Return products to safe storage immediately after use.
  - 4 Use extra caution during mealtimes and when the family routine is disrupted. Many poisonings take place at this time.
  - 5 Pesticides can be absorbed through the skin and can be extremely toxic. Keep children away from areas recently sprayed.
  - 6 Special care should be taken when poisons for ants, mice and rats are used around the home.
    - 1 Safely dispose of old or out dated products and their containers.
    - 2 Take time to teach children about poisonous substances

## **Medicines**

- 3 Keep medicine out of sight, locked up and out of reach of children
- 4 Make sure that all medicines are in their original labeled, child resistant containers.
- 5 Avoid taking medicines in front of children. Young children often imitate “grown-ups”.
- 6 DON’T call medicines candy. Some medicines and candy look-a-like and children cannot tell the difference.
- 1 Vitamins are to be regarded as medicines. Vitamins with iron can be especially poisonous.
- 1 Be aware of medicines visitors may bring into the home.

## **Plants**

- 2 Below are safety tips regarding plants? A list of poisonous and non-poisonous plants can be obtained from CARPIN.
- 1 Know the name of the plants in your home and its surroundings. Label all of your plants. Your local plant nursery can assist with identification.
- 1 Keep poisonous plants out of reach of children and pets.
- 1 Teach children not to put leaves and berries growing in the yard in their mouths.
- 1 Keep children and pets away from plants that have recently been sprayed with weed killer, bug killer and fertilizer.
- 1 Keep the telephone number of your local poison information provider and doctor on or near your telephone.