



# Adverse Use of Pesticides and Other Chemicals

**Professor Ravindra Fernando**

Senior Professor of Forensic Medicine and Toxicology

Faculty of Medicine

University of Colombo

# Overview

- Types and use
- Ways of entry
- Adverse effects acute/ chronic
- Epidemiology
- Environmental effects
- Pre-hospital care in poisoning
- Prevention

## Types and use

- Chemicals- laundry powder e.g. “PRINSO”  
cleaners, polishes, cosmetics
- Pesticides- insecticides, weedicides
- Food additives- colorings, preservatives

### In addition

- Insects
- Snakes
- Plants

# Circumstances of Poisoning

- Accidental
- Intentional
- Homicidal
- Occupational

# Ways of Entry into Human

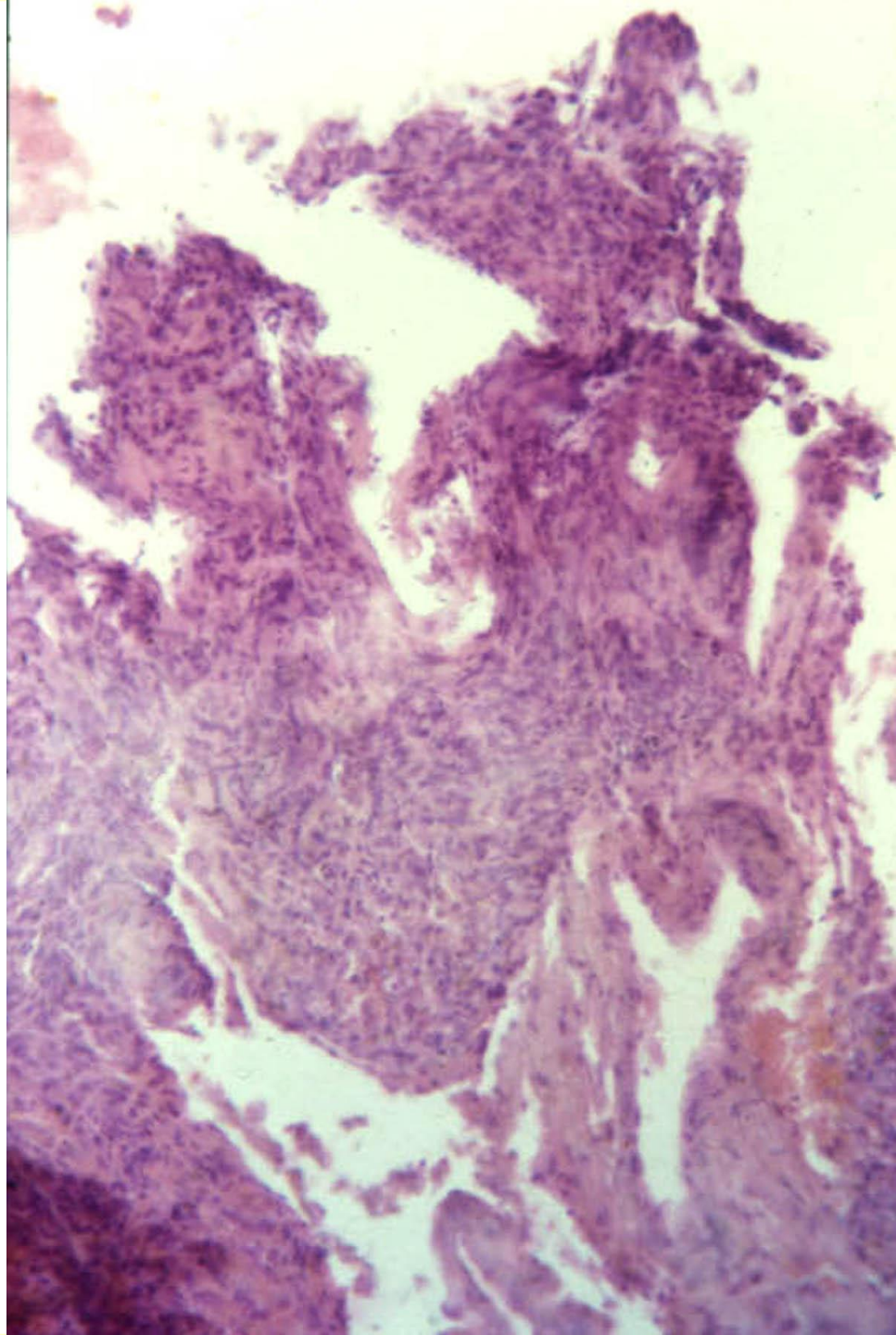
- Ingestion
- Inhalation
- Injection
- Skin Contamination
- Splashing into Eyes

# Acute Human Toxicity

- Circulatory- Increase or reduced heart/pulse rate
- Respiratory- Breathing difficulties
- Nervous- Numbness, paralysis, fits
- GIT- Nausea, vomiting, abdominal pain
- Skin- Skin irritation and burns
- Eye- Eye irritation, tearing, redness and itchy







# CHRONIC TOXICITY

- ☠ Cancer
- ☠ Neurological effects
- ☠ Reproductive toxicity
- ☠ Developmental toxicity
- ☠ Endocrine disruption
- ☠ Organic disorders
- ☠ Others

# LEADING CAUSES OF HOSPITAL DEATHS 2006

<b>1. Ischaemic heart disease</b>	<b>4123</b>
<b>2. Other heart diseases</b>	<b>3276</b>
<b>3. Cancer</b>	<b>3241</b>
<b>4. Respiratory diseases</b>	<b>2255</b>
<b>5. Gastrointestinal diseases</b>	<b>2255</b>
<b>6. Poisoning</b>	<b>1791</b>

# HOSPITAL ADMISSIONS AND DEATHS FROM POISONING 2006

	<b>Admissions</b>	<b>Deaths</b>	<b>CFR</b>
<b>Pesticides</b>	16 876	1 242	7.6
<b>Drugs</b>	19 242	139	0.7
<b>Snake bites</b>	39 693	100	0.3
<b>Others</b>	11 856	316	1.7
<b>TOTAL</b>	<b>93 773</b>	<b>1797</b>	<b>2.0</b>

# SNAKE BITE

## ADMISSIONS

## DEATHS

1994	-----	20705	159
1996	-----	27251	164
1998	-----	33607	169
2000	-----	37081	194
2002	-----	36740	92
2004	-----	34596	102
2006	-----	39693	100

# විෂ වීම් නිසා රෝහල් ගතවීම් සහ මරණ 2005

	රෝහල් ගතවීම්	මරණ	ප්‍රතිශතය
ප්‍රවෘද්ධනාශක	18180	1270	7.0
ඖෂධ	18325	151	0.8
සර්ප දෂ්ටන	36861	134	0.4
අනෙකුත් විෂ	17686	230	1.3
<b>එකතුව</b>	<b>91052</b>	<b>1785</b>	<b>2.0</b>

# SUICIDES 2006

ALL METHODS

Poisoning

MALES 3558 (79%) 2268

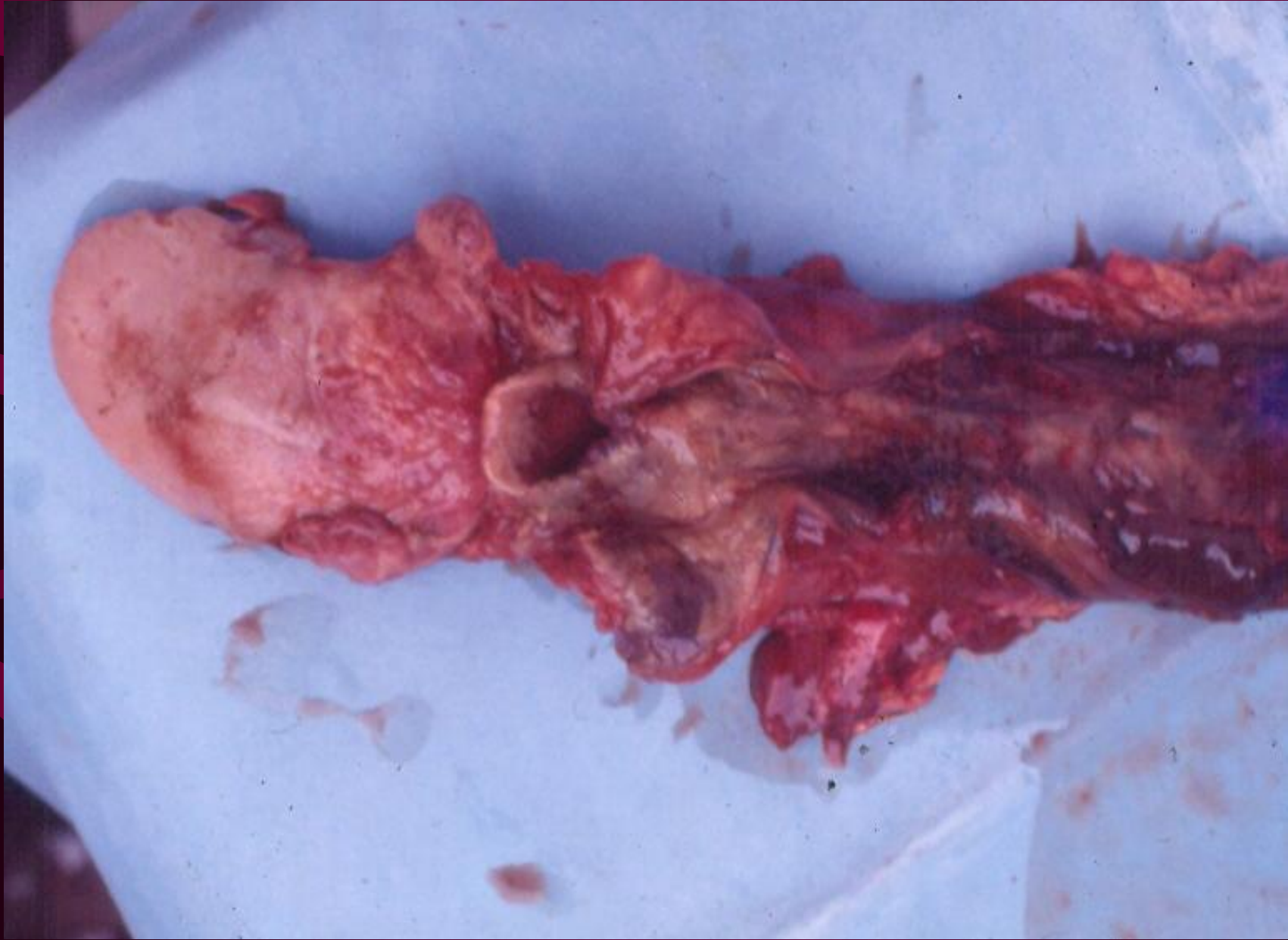
FEMALES 946 (21%) 519

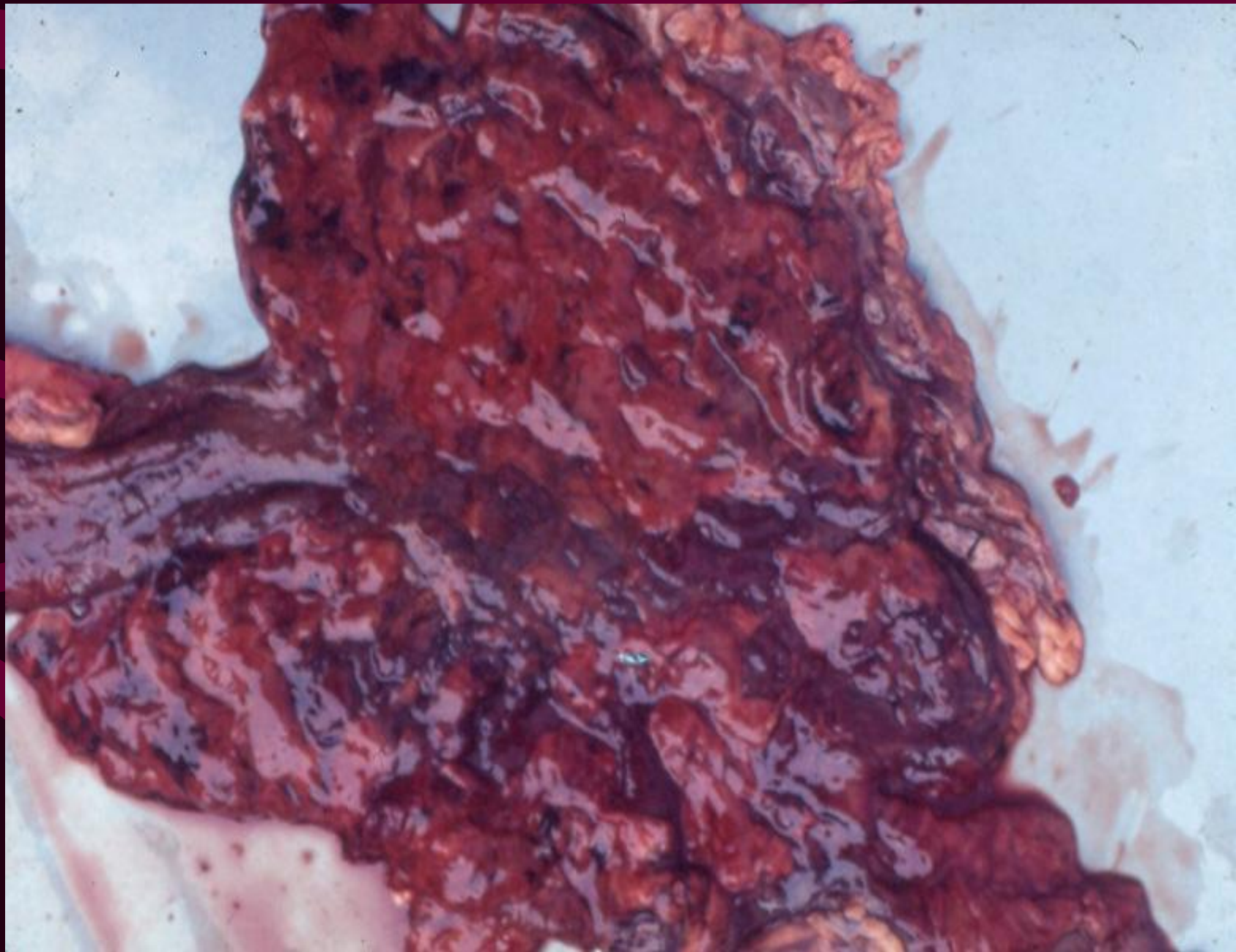
**TOTAL 4504 2787**

# Environmental Effects of Certain Poisons

- Water/ air/ soil pollution
- Adverse effects on plants/ animals















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# Pre-hospital care in Poisoning

- D - Danger
- R- Response
- A - Air Way
- B - Breathing
- C – Circulation
- Recovery Position
- Transport to a hospital



# Prevention of Poisoning

- Regulatory mechanism
- Law enforcement- Acts and ordinances (Refer Banned Chemicals in Sri Lanka by Prof. Ravindra Fernando and Dr. Shantha De Silva)
- Good practices / Proper practices
- Correct guidance
- Proper Awareness
- Minimal pesticides/ chemical/ drug list
- Integrated pest Mx





**DANGER**

**CONTAMINATED  
WATER  
NO DRINKING  
NO SWIMMING**





**RATED  
#1**

**PROFESSIONAL  
PESTICIDES IN WATER  
TEST KIT**

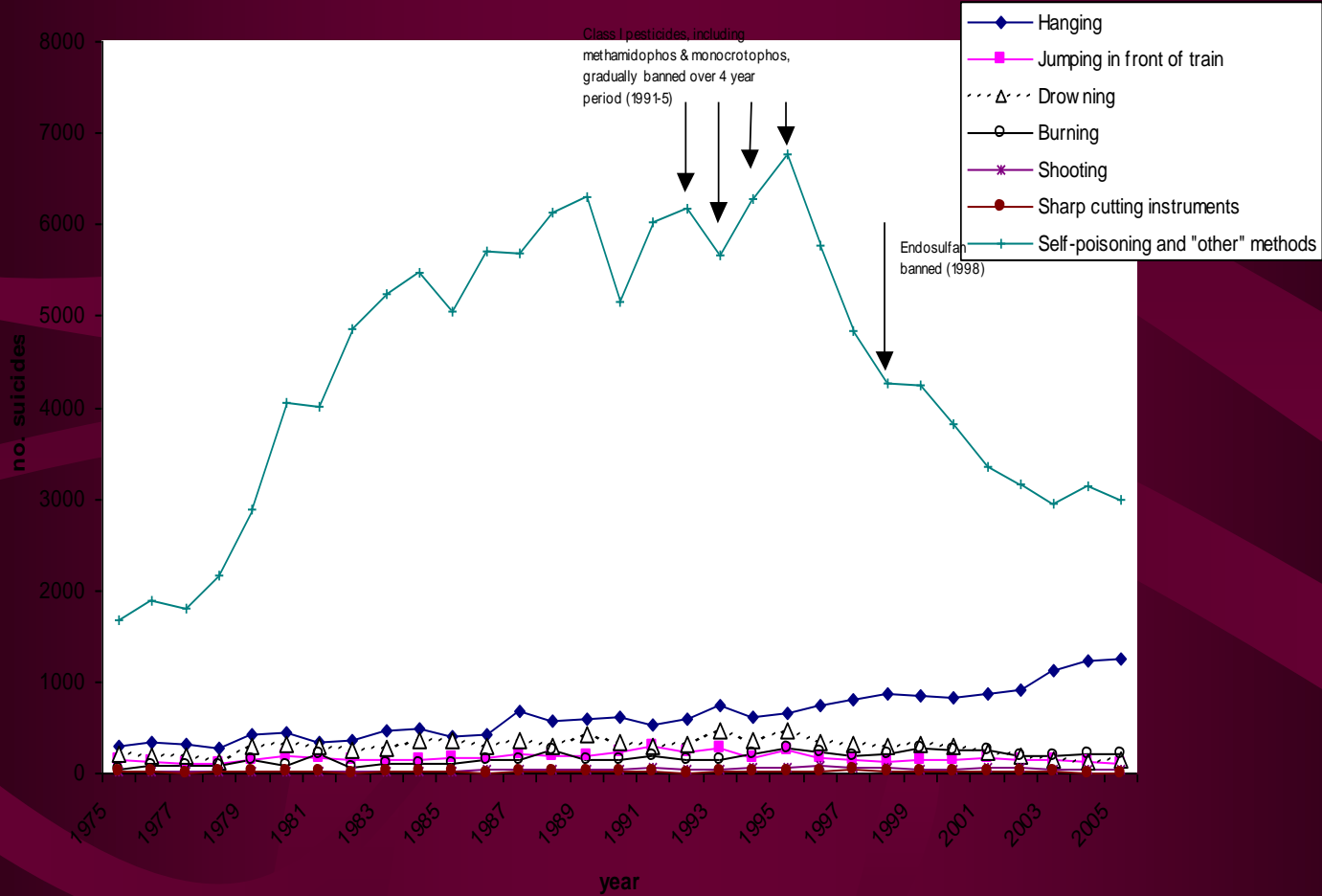
**WATER WITH PESTICIDES  
CAN BE DEADLY!**

- **SAFE, EASY TO USE**
- **RELIABLE RESULTS INSTANTLY**
- **LABORATORY TESTED FOR ACCURACY**

*Check Your Water For Pesticides From:*

- **FAUCETS**
- **RESERVOIRS**
- **PRIVATE WELLS**
- **LAKES & STREAMS**
- **HOME PURIFICATION SYSTEMS**
- **MUNICIPAL WATER SYSTEMS**

# Evidence from Sri Lanka in Reduction of suicides





THANK YOU