

HAZMAT TEAMS AND CHEMICAL SUICIDE



COURSE OVERVIEW

WE WILL DISCUSS THE FOLLOWING:

- DETERGENT/CHEMICAL SUICIDE
- CALL RESPONSE
- HAZMAT TEAM RESPONSE
- ON-SCENE MONITORING AND MITIGATION

CHEMICAL SUICIDE



CHEMICAL SUICIDE



DETERGENT SUICIDE

- USED IN JAPAN
- TOLERATED BY SOCIETY
- LONG HISTORY OF HONORABLE SUICIDE
- JOB LOSS, LOAN REPAYMENT, AND DEPRESSION
MAIN REASONS

DETERGENT SUICIDE

SUICIDE IN JAPAN

- MAIN METHODS: TRAINS, JUMPING, OVERDOSE, AND HANGING
- NEW METHOD: DETERGENT SUICIDE
- 2009 32,845 SUICIDES
- 2007 29 DETERGENT SUICIDES
- 2008 867 DETERGENT SUICIDES

DETERGENT SUICIDE

SUICIDE IN JAPAN

- SUICIDE WEBSITES
- SULPHUR BASED BATH SALTS/SOAPS MIXED WITH HOUSEHOLD CLEANERS CREATING HYDROGEN SULFIDE
- HYDROGEN SULFIDE PARTIES

CHEMICAL SUICIDE

SUICIDE IN THE US

- MENTAL DISORDERS, DEPRESSION, CHILD ABUSE, DRUG ABUSE, CRIMINAL OR FINANCIAL DIFFICULTIES.
- GUNS, JUMPING, AND HANGING

CHEMICAL SUICIDE

SUICIDE IN THE US

- 2007 34, 598 TOTAL
- 2010 36 CHEMICAL SUICIDES

HYDROGEN SULFIDE

- COLOURLESS, FLAMMABLE GAS
- HEAVIER THAN AIR VAPOR DENSITY 1.19
- LOW ODOR THRESHOLD BELOW 1PPM
- ROTTEN EGG SMELL TO 30PPM
- OLFACTORY PARALYSIS ABOVE 100PPM
- PROLONGED EXPOSURE

HYDROGEN SULFIDE

- CHEMICAL ASPHYXIAN
- INHIBITS CELLULAR RESPIRATION
- 5 TIMES MORE TOXIC THAN CARBON MONOXIDE
- CONFINED SPACES ARE MORE TOXIC

HYDROGEN SULFIDE

- LOW EXPOSURE 0-10 PPM
- MODERATE EXPOSURE 10-50 PPM
- HIGH EXPOSURE 50-200 PPM
- IDLH 100 PPM

HYDROGEN SULFIDE

400 PPM

CAN CAUSE UNCONSCIOUSNESS

1000 PPM

IMMEDIATE CARDIO PULMONARY ARREST

4000 PPM

LEL

HYDROGEN SULFIDE

OVER 150,000 PPM IN A
HONDA CIVIC

HYDROGEN SULFIDE

- LOW-IRRITATION OF EYES, NOSE AND THROAT
- MODERATE-HEADACHE, DIZZINESS, NAUSEA AND VOMITTING, COUGHING AND BREATHING DIFFICULTY
- HIGH-SEVERE RESPRATORY TRACT IRRITATION, EYE IRRITATION/ACUTE CONJUNCTIVITIS, SHOCK, CONVULSIONS, COMA, DEATH

HYDROGEN SULFIDE

“PAINLESS DEATH”

- INSUFFICIENT CONCENTRATIONS
- HARMFUL TO BYSTANDERS AND RESPONDERS
- CHEMICALS ARE CHANGING

HYDROGEN SULFIDE

- COMMON SOURCES OF ACIDS: TILE, BRICK, DRAIN CLEANERS, LYSOL, AND TOILET BOWL CLEANERS
- COMMON SOURCES OF SULFUR: FUNGICIDES, PESTICIDES, DANDRUFF SHAMPOO, AND EPSOM SALTS

HYDROGEN SULFIDE





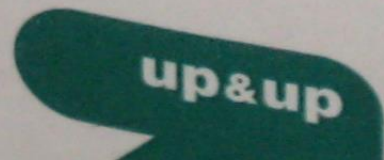
TAMPER EVIDENT PACKAGING:
CAUTION: Do not use if heat sealed
carton is improperly sealed.

epsom salt

NDC 11673-602-07

magnesium sulfate USP (heptahydrate)

soaking aid for minor sprains and bruises
saline laxative for relief of occasional
constipation



HYDROGEN SULFIDE

**OTHER POSSIBLE TOXIC BYPRODUCTS ARE: H₂S,
Sulfur Dioxide, Carbon Monoxide, Acid Gases,
Nitrogen Oxides, Phosgene, Carbon Disulfide,
Methyl Isocyanate, Thallium**

HYDROGEN CYANIDE

- COLORLESS, BURNT BITTER ALMOND SMELL, AND IS EXTREMELY TOXIC
- LIGHTER THAN AIR
- FLAMMABLE
- IDLH 50 PPM
- 250 PPM KILLS INSTANTLY
- ONSET OF SYMPTOMS IS RAPID AFTER EXPOSURE

HYDROGEN CYANIDE

- LOW: HEADACHE, NAUSEA, DIZZINESS, AND DIFFICULTY BREATHING
- HIGH: LOSS OF CONSCIOUSNESS, ABNORMAL HEART RHYTHM, COMA, AND DEATH

CALL RESPONSE

E-7 M330 UN-1 12745 SE MARKET, MOTHER
FOUND SON UNCON INSIDE PICK-UP WITH
STRANGE SMELL

E-7 M330 UN-1 525 SE 106TH, CALLER STATES SON
HAS LOCKED HIMSELF IN BATHROOM AND IS
NOT RESPONDING

DON'T BECOME COMPLACENT



~~XXXXXXXXXX~~
DANGER
~~XXXXXXXXXX~~
TOXIC
GAS
~~XXXXXXXXXX~~
FLAMMABLE
~~XXXXXXXXXX~~

CHEMICAL SUICIDE



HAZMAT TEAM RESPONSE

- GATHER INFORMATION FROM FIRST RESPONDERS
- GIVE FIRST AID AND DECON INFORMATION
- CONTACT OERS, POISON CONTROL, POLICE, HOSPITAL, AND MEDICAL EXAMINER

SECURING THE SCENE

The injuries to first responders have so far been minor. But in some cases where police officers have opened car doors or broken car windows without protective equipment, the gas “is knocking them right to the ground,” Chief Oreshan said.

SECURING THE SCENE

- ISOLATE THE AREA/ SET UP ZONES
- CHECK FOR SECONDARY DEVICES
- LOCATE CHEMICALS USED
- AIR MONITOR
- MINIMUM PPE-TURNOUTS AND SCBA

SECURING THE SCENE

- POLICE FOR TRAFFIC CONTROL AND SCENE SECURITY
- COVER/BLOCK AREA FROM FAMILY/BYSTANDERS





CHEMICAL SUICIDE



ONSCENE MONITORING AND MITIGATION

- MONITOR FOR OXYGEN, HYDROGEN SULFIDE, AND LEL LEVELS
- MONITOR AT MULTIPLE LEVELS
- DECON ANY PATIENTS BEFORE TRANSPORTING
- OVERPACK ANY CONTAINERS

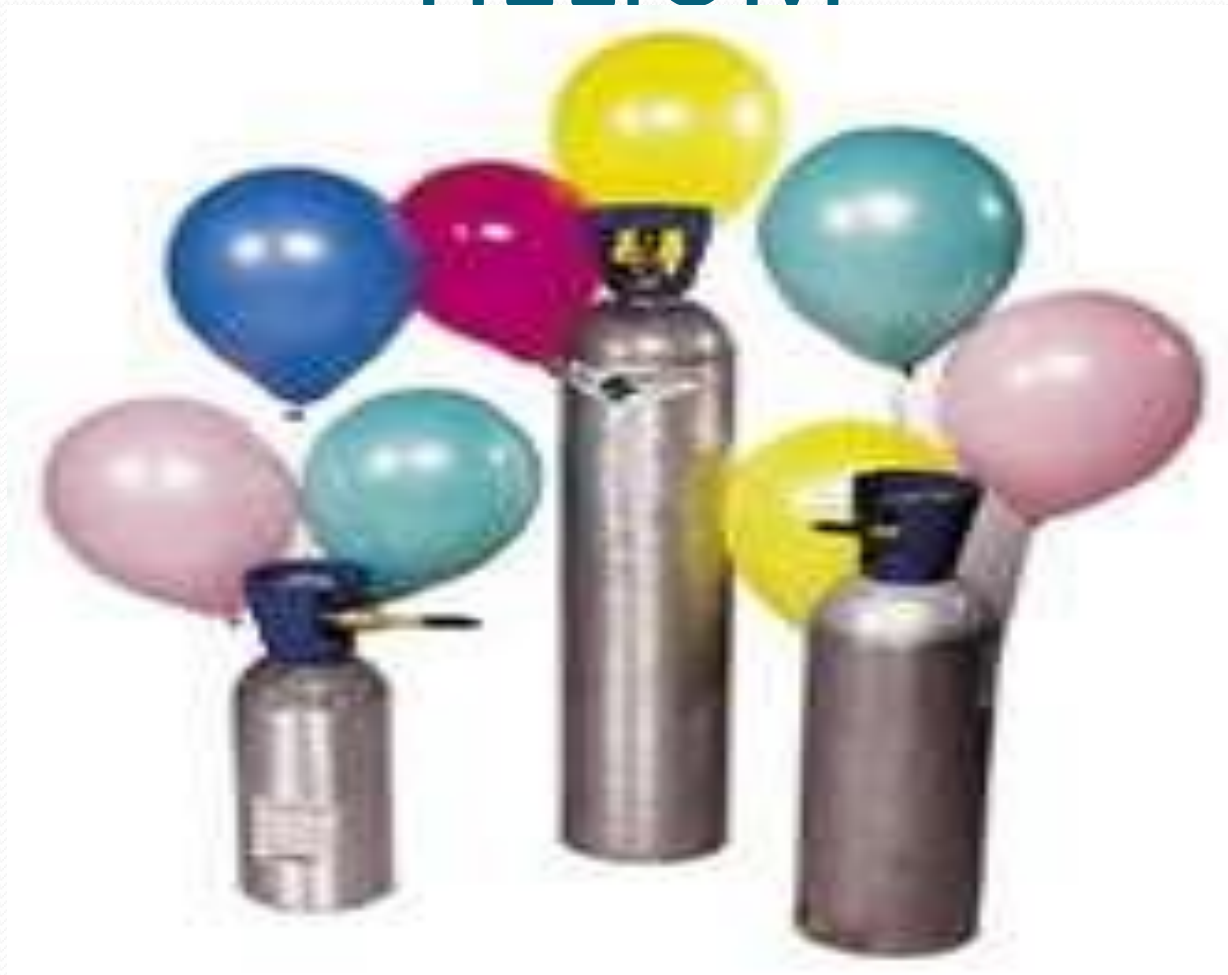




OTHER RESPONSE AGENCIES

- STATE HAZMAT TEAM
- POLICE
- FIRE FIRST RESPONDER
- AMBULANCE CREW
- MEDICAL EXAMINER
- TRAUMA INTERVENTION VOLUNTEER/PASTOR
- RED CROSS
- FUNERAL HOME

HELIUM



HELIUM SUICIDE

- HARMLESS TO BYSTANDERS
- NON FLAMMABLE
- LIGHTER-THAN-AIR
- TASTELESS
- ODORLESS



HELIUM SUICIDE

THE EXIT BAG

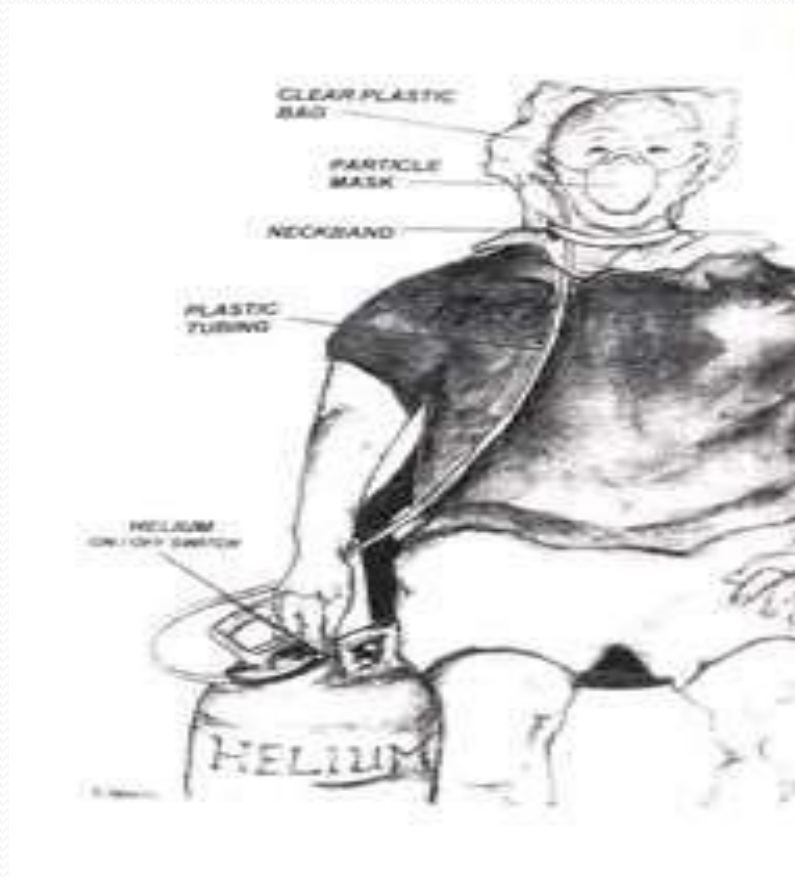
HELIUM SUICIDE



HELIUM SUICIDE

- KNOWN AND CONSISTENT QUALITY
- NO-EFFECTS
- DEATH BY LACK OF OXYGEN

HELIUM SUICIDE





HELIUM SUICIDE

ALMOST 100 SUICIDES IN NORTH AMERICA TO
DATE.

INCREASING IN POPULARITY



ARE THERE

ANY

QUESTIONS????