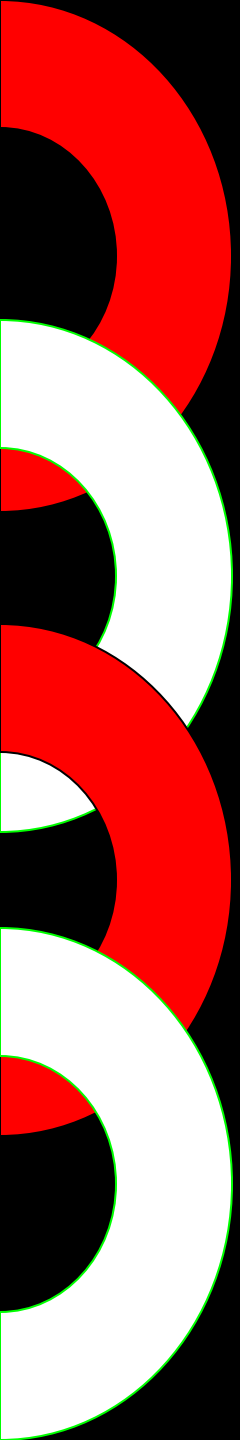




**Diethylenetriamene  
pentaacetate  
(DTPA)  
A Forward Placement  
Program**





# What Is DTPA?

- DTPA is a chelating agent
- Chelating agents work by binding radioactive materials or poisons in the body
- The chelating agent is then passed from the body in the urine.
- Chelating agents help decrease the time it takes to rid the body of radioactive materials or poisons.

# What Does DTPA Do?

- When radioactive materials enter the body through breathing, eating, drinking or open wounds, we say that “internal contamination” has occurred.
- Since the 1960’s DTPA has been used as a chelating agent to treat internal contamination from radioactive materials.
- DTPA is approved by the US Food and Drug Administration (FDA) for chelation of only 3 radioactive materials
  - Plutonium
  - Americium
  - Curium



## What DTPA Cannot Do

**DTPA cannot bind all of the radioactive materials that might get into a person's body after a radiological or nuclear event.**

**DTPA cannot prevent radioactive materials from entering the body.**

**DTPA cannot reverse the health effects caused by radioactive materials once they have entered the body.**



## How Does DTPA Work?

- DTPA comes in 2 forms
  - Calcium (Ca-DTPA)
  - Zinc (Zn-DTPA)
- Work by tightly chelating plutonium, americium and curium
- These bound materials are then excreted from the body in the urine.



## How Well Does DTPA Work?

- Chelating agents work best when given shortly after internal contamination
- After 24 hours, plutonium, americium and curium are more difficult to chelate.



## Who Should Get DTPA?

- Many people could be internally contaminated after a radiological or nuclear terrorist event.
- People contaminated with small amounts of radiological material may not need treatment with DTPA.
- Doctors and public health authorities will work together to decide who will likely benefit from DTPA treatment.



## Who Should Get DTPA?

- Infants (including breastfed infants) and children under 12 years of age
- Young adults and adults
- Pregnant women
- Breastfeeding women



# How Can DTPA Be Given?

- Injected directly into a vein
- Dripped into a vein intravenously (IV)
- Inhaled as a mist or spray



## How Often Will I Need To Get DTPA?

- DTPA should be taken only as long as your doctor has determined you need it.
- In the past, many people who have needed DTPA have only needed one dose.
- People with very high levels of internal contamination may require treatment with DTPA every day for weeks or months



## Medical Conditions That May Make It Harmful To Receive DTPA

- People whose kidneys do not function well
- People who have Hemochromatosis
- People with asthma
- People internally contaminated with uranium or neptunium



## **Possible Risks & Side Effects of DTPA**

DTPA does not build up in the body or cause long term health effects.

• People receiving repeat doses within a short period of time may experience:

Nausea

Vomiting

Diarrhea

Chills

Fever

Itching

Muscle Cramps



## **Possible Risks & Side Effects of DTPA**

- Ca-DTPA and Zn-DTPA can chelate certain important minerals that the body needs
- People receiving long term treatment with DTPA should be given a vitamin and mineral supplement that contains zinc



## Where Can I Get DTPA?

- CDC has included both Ca-DTPA and Zn-DTPA in the Strategic National Stockpile (SNS)
- During an emergency, these medications and medical supplies are given to doctors and hospitals for treatment of patients.



## Other Information Sources

More detailed information on DTPA can be found at:

FDA Web site

<http://www.fda.gov/cder/drug/infopage/dtpa>

CDC Web site

<http://www.bt.cdc.gov/radiation>

