



FACT SHEET

DTPA

Diethylenetriaminepentaacetate (DTPA) can remove certain radioactive materials from people's bodies, but it must be taken under the guidance of a doctor.

People may become internally contaminated (inside their bodies; see www.bt.cdc.gov/radiation/contamination.asp) with radioactive materials by accidentally ingesting (eating or drinking) or inhaling (breathing) them. The sooner that these materials are removed from the body, the fewer and less severe the health effects of the contamination will be. Small amounts of contamination may not require treatment, but doctors can give DTPA if they determine that a person who is internally contaminated would benefit from treatment.

What DTPA Is

DTPA is a calcium or zinc salt that has been used since the 1960s to treat people who have been internally contaminated with certain radioactive materials, such as americium (www.bt.cdc.gov/radiation/isotopes/americium.asp), plutonium (www.bt.cdc.gov/radiation/isotopes/plutonium.asp), californium, curium, and berkelium. Currently, DTPA is approved only for treatment of internal contamination with plutonium, americium, and curium.

How DTPA Works

DTPA comes in two forms: calcium (Ca-DTPA) and zinc (Zn-DTPA). Both forms are capable of binding to certain radioactive materials (refer to previous section) and speeding up the release of these materials in the urine, thus reducing the amount of internal contamination.

DTPA is most effective if given within the first 24 hours after internal contamination. However, DTPA is still effective several days or weeks after a person has been internally contaminated.

Who Can Take DTPA

Ca-DTPA is safe for most adults, but it **should not be taken** by people who have kidney disease or bone marrow depression. Also, **Ca-DTPA should not be taken** by children younger than 18 years of age, by pregnant women, or by people who have bone marrow problems. Ca-DTPA should be used with caution in patients suffering from a severe form of a disease called hemochromatosis. Children and pregnant women who are under a doctor's care can take small doses of Zn-DTPA. **Ca-DTPA and Zn-DTPA should not be used** to treat people who are internally contaminated with the radioactive materials uranium (www.bt.cdc.gov/radiation/isotopes/uranium.asp) or neptunium.

Side Effects of DTPA

Most DTPA is excreted (released) in the urine within 12 hours after it is given, so it does not build up in the body or cause long-term health effects. Side effects of treatment with DTPA can include headache, lightheadedness, chest pain, metallic taste in the mouth, nausea, diarrhea, and itching skin, but these symptoms decrease between treatments. Also, DTPA increases the loss of certain minerals (zinc, magnesium, and manganese) from the body, but supplements can be taken to offset this loss.

DTPA

(continued from previous page)

How DTPA Is Given

DTPA can be injected into a vein in the arm by using a syringe or a slow drip of liquid from a bag. DTPA can be given to people whose lungs have been contaminated with radioactive materials by having them inhale DTPA in a mist or spray. Inhaling DTPA may cause some people, especially those with asthma, to cough or wheeze.

DTPA may need to be administered daily for an extended period. However, **many people may need only one dose of DTPA** for treatment. The duration of treatment depends on the amount of internal contamination and the person's response to treatment. DTPA should be given only as long as a doctor has determined you need it.

During treatment, doctors may collect blood, urine, and feces samples from the people who are undergoing treatment. These samples provide information about levels of radioactive materials in the body.

Where You Can Get DTPA

DTPA is available only from a doctor. CDC has included both Zn- and Ca-DTPA in the Strategic National Stockpile (SNS), a special collection of drugs and medical supplies that CDC keeps to treat people in an emergency.

Where You Can Get More Information

More detailed information on DTPA can be found at the U.S. Food and Drug Administration (FDA) Web site at www.fda.gov/cder/drug/infopage/dtpa.

Additionally, you can call the CDC Public Response line at 1-800-311-3435 or visit the Web site at www.cdc.gov/netinfo.htm to request more information.

For more information, visit www.bt.cdc.gov/radiation,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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Page 2 of 2