

This fact sheet answers the most frequently asked health questions (FAQs) about tetryl. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to tetryl occurs around military installations where it was made, used, or stored. Workers who breathed tetryl-laden dust complained of coughs, fatigue, headaches, eye irritation, lack of appetite, nosebleeds, nausea, and vomiting. This substance has been found in at least 12 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is tetryl?

(Pronounced tět/rəl)

The chemical name for tetryl is 2,4,6-trinitrophenyl-*n*-methylnitramine. Some commonly used names are nitramine, tetralite, and tetril.

Tetryl is an odorless, synthetic, yellow crystal-like solid that is not found naturally in the environment. Under certain conditions, tetryl can exist as dust in air. It dissolves slightly in water and in other liquids.

Tetryl was used to make explosives, mostly during World Wars I and II. It is no longer manufactured or used in the United States.

Stocks of tetryl are found in storage at military installations and are being destroyed by the Department of Defense (DOD).

What happens to tetryl when it enters the environment?

- Tetryl may be released to the air, water, and soil when old stores of the explosive are destroyed by exploding or burning.

- It is not likely to evaporate from water or soil.
- It breaks down rapidly in sunlit rivers and lakes, but much more slowly in groundwater.
- Tetryl does not move easily from soil to groundwater.
- It is not known if tetryl builds up in fish, plants, or land animals.

How might I be exposed to tetryl?

Most people are not exposed to tetryl because contamination is around military installations where it was made, used, or stored. You may be exposed by:

- Drinking contaminated well water near a military installation site.
- Breathing contaminated dust near a military installation site.
- Having skin contact with contaminated soil or water near a military installation site.

How can tetryl affect my health?

Workers at military facilities during World Wars I and II who breathed tetryl-laden dust complained of coughs, fatigue, headaches, eye irritation, lack of appetite, nosebleeds, nausea,

ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>

and vomiting.

Workers who routinely handled tetryl developed a distinct yellow staining of the hands, neck, and hair. Many workers who had skin contact with tetryl developed skin rashes. Some also developed allergies with asthma-like reactions (severe coughing and wheezing) after breathing tetryl.

Rabbits fed high doses of tetryl every day for 6–9 months developed effects on the kidneys and liver. Decreased blood-clotting capability and changes in the spleen were also noted. We do not know if these effects would occur in humans exposed to similar doses of tetryl.

We do not know if tetryl causes birth defects, or if it affects reproduction in humans or animals.

How likely is tetryl to cause cancer?

The International Agency for Research on Cancer (IARC), the Department of Health and Human Services (DHHS), and the EPA have not reviewed tetryl to determine whether it is likely to cause cancer.

The carcinogenicity of tetryl in humans and animals has not been studied.

Is there a medical test to show whether I've been exposed to tetryl?

There is no routine medical test to show if you have been exposed to tetryl. Breakdown products of tetryl have been measured in the urine of animals, and similar measurements of tetryl breakdown products in the urine of people could be completed.

Has the federal government made recommendations to protect human health?

The Department of Transportation (DOT) has many regulations for the transportation of explosives including tetryl.

The Occupational Safety and Health Administration (OSHA) set a maximum level of 1.5 milligrams of tetryl per cubic meter of workplace air (1.5 mg/m³) for an 8-hour workday, 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) and the American Conference of Governmental Industrial Hygienists (ACGIH) also recommend a maximum concentration of 1.5 mg/m³ in workplace air for an 8- to 10-hour workday, 40-hour workweek.

Glossary

Breakdown product: A substance that is formed when a chemical breaks down in the body.

Carcinogenicity: Ability to cause cancer.

CAS: Chemical Abstracts Service.

Evaporate: To change into a vapor or a gas.

Milligram (mg): One thousandth of a gram.

Synthetic: Made by humans.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for tetryl (update). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html> ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

