SUMMARY: Everyone is exposed to very low levels of the nitrophenols in air, water, and soil. Workers who make or process the chemicals may be exposed to higher levels of them. Animal studies suggest that 4-nitrophenol may cause a blood disorder. These chemicals have been found in at least 113 of 1,416 National Priorities List sites identified by the Environmental Protection Agency.

What are nitrophenols?
(Pronounced nɪˈtrō fə/ nolz)
Nitrophenols include two chemicals, 2-nitrophenol and 4-nitrophenol, which are very similar to each other. They are manufactured chemicals that do not occur naturally in the environment. The manufacture of one almost always produces a little of the other, so they are grouped together when discussing their properties and harmful effects.

2-Nitrophenol is a light yellow solid with a peculiar sweet smell. 4-Nitrophenol is a colorless to light yellow solid with very little odor.

2-Nitrophenol is used mainly to make dyes, paint coloring, rubber chemicals, and substances that kill molds. 4-Nitrophenol is used mainly to make drugs, fungicides, dyes, and to darken leather.

How might I be exposed to nitrophenols?

- Exposure to very low levels of nitrophenols in air, water, and soil.
- Breathing contaminated workplace air with higher levels of the chemicals (especially during spills).
- Breathing contaminated air (during application) or drinking contaminated water near farming areas where certain fungicides are used.
- Breathing contaminated air or drinking contaminated water near waste sites and landfills.

How can nitrophenols affect my health?
There are no studies that have looked at the effects of the nitrophenols in people. All our information comes from studies in animals. Some studies in animals have shown that
NITROPHENOLS
CAS # 88-75-5 and 100-02-7

Is there a medical test to show whether I’ve been exposed to nitrophenols?

There is a medical test available to measure levels of 4-nitrophenol in urine and blood. However, this test will only detect the chemical when exposure has been very recent because 4-nitrophenol leaves the body through the urine within a few hours.

Other chemicals can produce the same effects on the blood as 4-nitrophenol, so it is not possible to tell from the blood test whether the exposure was from 4-nitrophenol only.

No tests are available to measure exposure to 2-nitrophenol.

Has the federal government made recommendations to protect human health?

The EPA requires that discharges or accidental spills into the environment of 100 pounds or more of the nitrophenols be reported.

Glossary
Carcinogenicity: Ability to cause cancer.
Fungicide: Substance that kills molds.
Ingesting: Taking food or drink into your body.
Short time: Lasting 14 days or less.

References

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.