



Nickel and Nickel Compounds

Why am I being warned about potential exposure to nickel and nickel compounds?



- Nickel and nickel compounds are on the [Proposition 65](#) list for cancer. Exposure to nickel or nickel compounds can cause cancer of the nasal cavity, paranasal sinus, and lungs.
- Certain nickel compounds, specifically soluble nickel compounds and nickel carbonyl, are also on the Proposition 65 list for [reproductive toxicity](#).
 - ▶ During pregnancy, exposure to soluble nickel compounds or nickel carbonyl may affect the baby's development.
 - ▶ Exposure to soluble nickel compounds may also harm the male reproductive system.
- California's Proposition 65 requires [businesses](#) to warn people before exposing them to a significant amount of a [chemical](#) listed under Proposition 65 for cancer or reproductive toxicity.

What are nickel and nickel compounds?

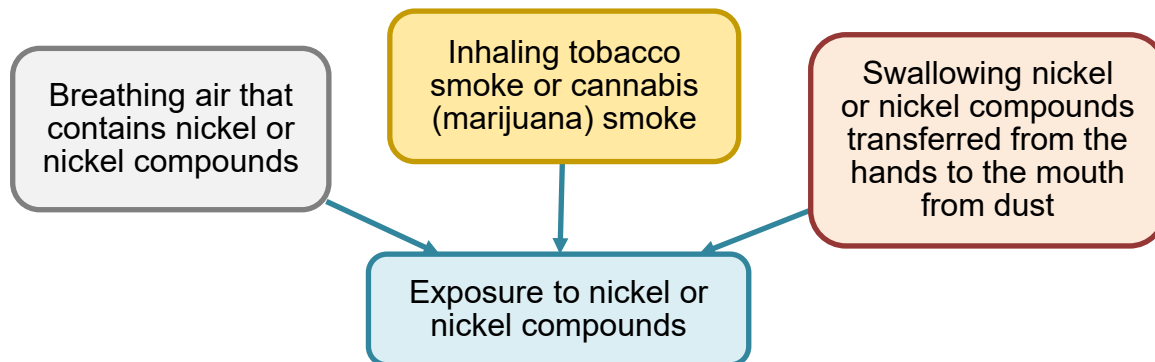
- Nickel is a metal that can be combined with elements such as sulfur, chlorine, and oxygen to form nickel compounds.
- Nickel can be also combined with other metals to form nickel alloys, such as stainless steel used in cookware, and other alloys used to make coins.
 - ▶ Normal handling of coins does not expose you to significant amounts of nickel or nickel compounds.
 - ▶ Nickel-cadmium (NiCd or NiCad) batteries in sealed condition do not expose you to significant amounts of nickel or nickel compounds.

What are some ways you can be exposed to nickel or nickel compounds?

You can be exposed by inhaling nickel or nickel compounds, or by inhaling particles that contain them. You can also be exposed by swallowing dust that contains nickel or nickel compounds.

- Tobacco and cannabis (marijuana) plants can be contaminated with nickel and other toxic metals that may be present in the soil, air, and water in which they grow. Smoking tobacco or cannabis, or inhaling secondhand [tobacco smoke](#) or [cannabis smoke](#), can expose you to significant amounts of nickel or nickel compounds.
- Nickel and nickel compounds are also found in dust and fumes from metal production and processing (for example, from welding and electroplating), and from nickel refineries.
- During pregnancy, nickel and nickel compounds can pass from mother to baby.

Some ways you can be exposed to nickel or nickel compounds:



How can I reduce my exposure to nickel and nickel compounds?

- ⊗ Do not smoke. Avoid smoking tobacco or cannabis around children, and do not allow them to spend time in places where tobacco or cannabis smoke is present.
- ✓ Properly handle and [recycle](#) nickel-cadmium batteries, especially if they are damaged or leaking.
- ✓ Minimize your exposure to dust, which may contain nickel or nickel compounds.
 - ▶ Wash your hands and your child's hands frequently, especially before preparing food and before eating.
 - ▶ Clean your floors regularly, using a wet mop or a vacuum cleaner with a high-efficiency particulate air (HEPA) filter, if possible.
 - ▶ Wipe up dust regularly, using a damp cloth.

For more information:

General Fact Sheets and Resources

- National Institutes of Health (NIH)
National Cancer Institute (NCI)
 - ▶ Nickel Compounds
<https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/nickel>

Battery Recycling

- California Environmental Protection Agency (CalEPA)
CalRecycle
 - ▶ Battery Stewardship
<https://calrecycle.ca.gov/epr/batteries/>
- Department of Toxic Substances Control (DTSC)
 - ▶ Managing Hazardous Waste. Universal Waste - Batteries
<https://dtsc.ca.gov/universalwaste/universal-waste-for-residents-batteries/>

Scientific Information on Nickel and Nickel Compounds

- California Environmental Protection Agency (CalEPA)
Office of Environmental Health Hazard Assessment (OEHHA)
 - ▶ Evidence on the Developmental and Reproductive Toxicity of Nickel and Nickel Compounds
<https://oehha.ca.gov/media/downloads/crn/nihid072718.pdf>
- National Toxicology Program (NTP)
 - ▶ Report on Carcinogens, Fifteenth Edition
Nickel Compounds and Metallic Nickel
<https://ntp.niehs.nih.gov/sites/default/files/ntp/roc/content/profiles/nickel.pdf>
- Centers for Disease Control and Prevention (CDC)
 - ▶ Toxicological Profile for Nickel
<https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=245&tid=44>
- World Health Organization (WHO)
International Agency for Research on Cancer (IARC)
 - ▶ IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, vol. 100C (2012). "Nickel and Nickel Compounds," in Arsenic, Metals, Fibres, and Dusts, pages 169-218.
<https://publications.iarc.fr/Book-And-Report-Series/Iarc-Monographs-On-The-Identification-Of-Carcinogenic-Hazards-To-Humans/Arsenic-Metals-Fibres-And-Dusts-2012>

Proposition 65

- California Environmental Protection Agency (CalEPA)
Office of Environmental Health Hazard Assessment (OEHHA)
 - ▶ Proposition 65: Background
<https://www.p65warnings.ca.gov/faq>
 - ▶ Proposition 65: The List of Chemicals
<https://www.p65warnings.ca.gov/chemicals>
 - ▶ Proposition 65: Fact Sheets
<https://www.p65warnings.ca.gov/fact-sheets>