



Right to Know Hazardous Substance Fact Sheet

Common Name: **NICKEL**

Synonyms: Nickel Catalyst; Pulverized Nickel; Raney Alloy; Raney Nickel

Chemical Name: Nickel

Date: March 2007 Revision: July 2012

CAS Number: 7440-02-0

RTK Substance Number: 1341

DOT Number: UN 2881 (Nickel catalyst, dry)

Description and Use

Nickel is an odorless, silvery, hard, metallic solid used in making stainless steel, coins and alkaline batteries, as an alloy and catalyst, and for electroplating. *Raney Nickel* is a finely powdered, grayish metal that is used in processing vegetable and petroleum oils.

Reasons for Citation

- ▶ **Nickel** is on the Right to Know Hazardous Substance List because it is cited by OSHA, ACGIH, DOT, NIOSH, NTP, DEP, IARC, IRIS, NFPA and EPA.
- ▶ This chemical is on the Special Health Hazard Substance List.

SEE GLOSSARY ON PAGE 5.

FIRST AID

Eye Contact

- ▶ Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids. Remove contact lenses, if worn, while rinsing.

Skin Contact

- ▶ Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

Inhalation

- ▶ Remove the person from exposure.
- ▶ Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
- ▶ Transfer promptly to a medical facility.

EMERGENCY NUMBERS

Poison Control: 1-800-222-1222

CHEMTREC: 1-800-424-9300

NJDEP Hotline: 1-877-927-6337

National Response Center: 1-800-424-8802

EMERGENCY RESPONDERS >>>> SEE LAST PAGE

Hazard Summary

Hazard Rating	NJDOH	NFPA
HEALTH	3	2 (catalyst)
FLAMMABILITY	-	4 (catalyst)
REACTIVITY	-	1 (catalyst)

CARCINOGEN
FLAMMABLE POWDER OR DUST
POISONOUS GASES ARE PRODUCED IN FIRE
CONTAINERS MAY EXPLODE IN FIRE

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

- ▶ **Nickel** should be handled as a CARCINOGEN--WITH EXTREME CAUTION.
- ▶ **Nickel** can affect you when inhaled and may be absorbed through the skin.
- ▶ Contact can irritate and may burn the skin and eyes.
- ▶ Inhaling **Nickel** can irritate the nose, throat and lungs.
- ▶ Exposure to **Nickel** may cause a flu-like illness called "metal fume fever."
- ▶ **Nickel** can cause headache, dizziness, nausea and vomiting.
- ▶ **Nickel** may cause a skin allergy and an asthma-like allergy.
- ▶ Inhaling **Nickel** can cause a sore and/or a hole in the "bone" (septum) dividing the inner nose.
- ▶ **Nickel** may affect the liver and kidneys.
- ▶ **Nickel powder** and *Raney Nickel* are FLAMMABLE SOLIDS and DANGEROUS FIRE HAZARDS.

Workplace Exposure Limits

OSHA: The legal airborne permissible exposure limit (PEL) is **1 mg/m³** averaged over an 8-hour workshift.

NIOSH: The recommended airborne exposure limit (REL) is **0.015 mg/m³** averaged over a 10-hour workshift.

ACGIH: The threshold limit value (TLV) is **1.5 mg/m³** (as the *inhalable fraction*) averaged over an 8-hour workshift.

- ▶ **Nickel** is a PROBABLE CARCINOGEN in humans. There may be no safe level of exposure to a carcinogen, so all contact should be reduced to the lowest possible level.
- ▶ The above exposure limits are for air levels only. When skin contact also occurs, you may be overexposed, even though air levels are less than the limits listed above.

Determining Your Exposure

- ▶ Read the product manufacturer's Material Safety Data Sheet (MSDS) and the label to determine product ingredients and important safety and health information about the product mixture.
- ▶ For each individual hazardous ingredient, read the New Jersey Department of Health Hazardous Substance Fact Sheet, available on the RTK website (www.nj.gov/health/eoh/rtkweb) or in your facility's RTK Central File or Hazard Communication Standard file.
- ▶ You have a right to this information under the New Jersey Worker and Community Right to Know Act and the Public Employees Occupational Safety and Health (PEOSH) Act if you are a public worker in New Jersey, and under the federal Occupational Safety and Health Act (OSHA) if you are a private worker.
- ▶ The New Jersey Right to Know Act requires most employers to label chemicals in the workplace and requires public employers to provide their employees with information concerning chemical hazards and controls. The federal OSHA Hazard Communication Standard (29 CFR 1910.1200) and the PEOSH Hazard Communication Standard (N.J.A.C. 12:100-7) require employers to provide similar information and training to their employees.

This Fact Sheet is a summary of available information regarding the health hazards that may result from exposure. Duration of exposure, concentration of the substance and other factors will affect your susceptibility to any of the potential effects described below.

Health Hazard Information

Acute Health Effects

The following acute (short-term) health effects may occur immediately or shortly after exposure to **Nickel**:

- ▶ Contact can irritate and may burn the skin and eyes.
- ▶ Inhaling **Nickel** can irritate the nose, throat and lungs.
- ▶ Exposure to **Nickel** may cause "metal fume fever." This is a flu-like illness with symptoms of metallic taste in the mouth, headache, fever and chills, aches, chest tightness and cough. The symptoms may be delayed for several hours after exposure and usually last for a day or two.
- ▶ **Nickel** can cause headache, dizziness, nausea and vomiting.

Chronic Health Effects

The following chronic (long-term) health effects can occur at some time after exposure to **Nickel** and can last for months or years:

Cancer Hazard

- ▶ **Nickel** is a PROBABLE CARCINOGEN in humans. There is evidence that it causes lung cancer in humans and it has been shown to cause lung cancer in animals.
- ▶ Many scientists believe there is no safe level of exposure to a carcinogen. Such substances may also have the potential for causing reproductive damage in humans.

Reproductive Hazard

- ▶ While **Nickel** has not been identified as a teratogen or a reproductive hazard, *Nickel salts* and certain *Nickel compounds* are teratogens and may also cause reproductive damage. **Nickel** should be handled WITH EXTREME CAUTION.

Other Effects

- ▶ Exposure to **Nickel** may cause a skin allergy. If allergy develops, very low future exposure can cause itching and a skin rash.
- ▶ **Nickel** may cause an asthma-like allergy. Future exposure can cause asthma attacks with shortness of breath, wheezing, coughing, and/or chest tightness.
- ▶ Inhaling **Nickel** can cause a sore and/or a hole in the "bone" (septum) dividing the inner nose, sometimes with bleeding, discharge and loss of smell (anosmia).
- ▶ **Nickel** can cause chronic bronchitis and may cause scarring of the lungs.
- ▶ **Nickel** may affect the liver and kidneys.

Medical

Medical Testing

For frequent or potentially high exposure (half the PEL or greater), the following are recommended before beginning work and at regular times after that:

- ▶ Liver function tests
- ▶ Chest x-ray

If symptoms develop or overexposure is suspected, the following are recommended:

- ▶ Kidney function tests
- ▶ A qualified allergist can help diagnose skin allergy.
- ▶ Lung function tests. The results may be normal if the person is not having an attack at the time of the test.

Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

You have a legal right to request copies of your medical testing under the OSHA Access to Employee Exposure and Medical Records Standard (29 CFR 1910.1020).

Mixed Exposures

- ▶ Smoking can cause heart disease, lung cancer, emphysema, and other respiratory problems. It may worsen respiratory conditions caused by chemical exposure. Even if you have smoked for a long time, stopping now will reduce your risk of developing health problems.
- ▶ More than light alcohol consumption can cause liver damage. Drinking alcohol may increase the liver damage caused by **Nickel**.

Conditions Made Worse By Exposure

- ▶ Persons who are allergic to **Nickel** may also react to Nickel-coated jewelry, watchbands and sometimes to prolonged contact with keys, coins, etc.

Workplace Controls and Practices

Very toxic chemicals, or those that are reproductive hazards or sensitizers, require expert advice on control measures if a less toxic chemical cannot be substituted. Control measures include: (1) enclosing chemical processes for severely irritating and corrosive chemicals, (2) using local exhaust ventilation for chemicals that may be harmful with a single exposure, and (3) using general ventilation to control exposures to skin and eye irritants. For further information on workplace controls, consult the NIOSH document on Control Banding at www.cdc.gov/niosh/topics/ctrlbanding/.

The following work practices are also recommended:

- ▶ Label process containers.
- ▶ Provide employees with hazard information and training.
- ▶ Monitor airborne chemical concentrations.
- ▶ Use engineering controls if concentrations exceed recommended exposure levels.
- ▶ Provide eye wash fountains and emergency showers.
- ▶ Wash or shower if skin comes in contact with a hazardous material.
- ▶ Always wash at the end of the workshift.
- ▶ Change into clean clothing if clothing becomes contaminated.
- ▶ Do not take contaminated clothing home.
- ▶ Get special training to wash contaminated clothing.
- ▶ Do not eat, smoke, or drink in areas where chemicals are being handled, processed or stored.
- ▶ Wash hands carefully before eating, smoking, drinking, applying cosmetics or using the toilet.

In addition, the following may be useful or required:

- ▶ Before entering a confined space where **Nickel powder** or *Raney Nickel* may be present, check to make sure that an explosive concentration does not exist.
- ▶ Use a vacuum to reduce dust during clean-up. **DO NOT DRY SWEEP.**
- ▶ Use a high efficiency particulate air (HEPA) filter when vacuuming. Do not use a standard shop vacuum.

Personal Protective Equipment

The OSHA Personal Protective Equipment Standard (29 CFR 1910.132) requires employers to determine the appropriate personal protective equipment for each hazard and to train employees on how and when to use protective equipment.

The following recommendations are only guidelines and may not apply to every situation.

Gloves and Clothing

- ▶ Avoid skin contact with **Nickel**. Wear personal protective equipment made from material that can not be permeated or degraded by this substance. Safety equipment suppliers and manufacturers can provide recommendations on the most protective glove and clothing material for your operation.
- ▶ The recommended glove materials for **Nickel** are Nitrile and Neoprene.
- ▶ The recommended protective clothing material for **Nickel** is Tyvek®.

- ▶ All protective clothing (suits, gloves, footwear, headgear) should be clean, available each day, and put on before work.

Eye Protection

- ▶ Wear direct vent goggles when airborne particles or dust are present.

Respiratory Protection

Improper use of respirators is dangerous. Respirators should only be used if the employer has implemented a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing, and medical exams, as described in the OSHA Respiratory Protection Standard (29 CFR 1910.134). **Only NIOSH approved respirators should be used.**

- ▶ Where the potential exists for exposure over **0.015 mg/m³**, use a negative pressure, air-purifying, particulate filter respirator with an N, R or P100 filter. More protection is provided by a full facepiece respirator than by a half-mask respirator, and even greater protection is provided by a powered-air purifying respirator.
- ▶ Leave the area immediately if (1) while wearing a filter or cartridge respirator you can smell, taste, or otherwise detect **Nickel**, (2) while wearing particulate filters abnormal resistance to breathing is experienced, or (3) eye irritation occurs while wearing a full facepiece respirator. Check to make sure the respirator-to-face seal is still good. If it is, replace the filter or cartridge. If the seal is no longer good, you may need a new respirator.
- ▶ Consider all potential sources of exposure in your workplace. You may need a combination of filters, prefilters or cartridges to protect against different forms of a chemical (such as vapor and mist) or against a mixture of chemicals.
- ▶ Where the potential for high exposure exists, use a supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus or an emergency escape air cylinder.
- ▶ Exposure to **10 mg/m³** is immediately dangerous to life and health. If the possibility of exposure above **10 mg/m³** exists, use a self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode equipped with an emergency escape air cylinder.

Fire Hazards

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA Fire Brigades Standard (29 CFR 1910.156).

- ▶ **Nickel powder** and *Raney Nickel* are **FLAMMABLE SOLIDS**.
- ▶ Use dry sand, sodium chloride powder, graphite or an approved Class D extinguisher appropriate for extinguishing metal fires.
- ▶ **DO NOT USE WATER** directly on **Nickel powder** or *Raney Nickel* as flammable and explosive *Hydrogen gas* may be formed.
- ▶ **DO NOT USE** foam or CO₂ as extinguishing agents.
- ▶ **POISONOUS GASES ARE PRODUCED IN FIRE**, including *Nickel Carbonyl* and *Nickel Oxide*.
- ▶ **CONTAINERS MAY EXPLODE IN FIRE.**
- ▶ Use water spray to keep fire-exposed containers cool.
- ▶ **Nickel powder** and *dust*, and *Raney Nickel*, may form ignitable dust/air mixtures in closed tanks or containers.

Spills and Emergencies

If employees are required to clean-up spills, they must be properly trained and equipped. The OSHA Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) may apply.

If **Nickel powder** or *Raney Nickel* is spilled take the following steps:

- ▶ Evacuate personnel and secure and control entrance to the area.
- ▶ Eliminate all ignition sources.
- ▶ Cover with dry earth or sand and place into sealed containers for disposal.
- ▶ Ventilate and wash area after clean-up is complete.
- ▶ DO NOT wash into sewer.
- ▶ Keep **Nickel powder** and *dust*, and *Raney Nickel*, out of confined spaces, such as sewers, because of the possibility of an explosion.
- ▶ It may be necessary to contain and dispose of **Nickel** as a HAZARDOUS WASTE. Contact your state Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.

Handling and Storage

- ▶ Prior to working with **Nickel** you should be trained on its proper handling and storage.
- ▶ *Very fine Nickel powder* and *dust*, and *Raney Nickel*, react with AIR and can spontaneously ignite or produce flammable and explosive *Hydrogen gas*.
- ▶ **Nickel powder** and *Raney Nickel* react violently with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE) and STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC).
- ▶ **Nickel powder** reacts violently with TITANIUM POWDER; POTASSIUM PERCHLORATE; and AMMONIUM NITRATE to cause fire and explosions.
- ▶ **Nickel** is not compatible with ALUMINUM; AMMONIA; AMMONIUM NITRATE; BROMINE PENTAFLUORIDE; DIOXANE; HYDRAZINE; METHANOL; NITRYL FLUORIDE; ORGANIC SOLVENTS; PHOSPHORUS; POTASSIUM PERCHLORATE; SELENIUM; and SULFUR.
- ▶ Store *Raney Nickel* under water or an inert gas, in tightly closed containers, in a cool, well-ventilated area.
- ▶ Sources of ignition, such as smoking and open flames, are prohibited where **Nickel powder** and *Raney Nickel* are used, handled, or stored.
- ▶ Use explosion-proof electrical equipment and fittings where **Nickel powder** and *Raney Nickel* are used, handled, or stored.
- ▶ Use only non-sparking tools and equipment, especially when opening and closing containers of **Nickel powder** and *Raney Nickel*.

Occupational Health Information Resources

The New Jersey Department of Health offers multiple services in occupational health. These services include providing informational resources, educational materials, public presentations, and industrial hygiene and medical investigations and evaluations.

For more information, please contact:

New Jersey Department of Health
 Right to Know
 PO Box 368
 Trenton, NJ 08625-0368
 Phone: 609-984-2202
 Fax: 609-984-7407
 E-mail: rtk@doh.state.nj.us
 Web address: <http://www.nj.gov/health/eoh/rtkweb>

The Right to Know Hazardous Substance Fact Sheets are not intended to be copied and sold for commercial purposes.

GLOSSARY

ACGIH is the American Conference of Governmental Industrial Hygienists. They publish guidelines called Threshold Limit Values (TLVs) for exposure to workplace chemicals.

Acute Exposure Guideline Levels (AEGLs) are established by the EPA. They describe the risk to humans resulting from once-in-a-lifetime, or rare, exposure to airborne chemicals.

Boiling point is the temperature at which a substance can change its physical state from a liquid to a gas.

A **carcinogen** is a substance that causes cancer.

The **CAS number** is unique, identifying number, assigned by the Chemical Abstracts Service, to a specific chemical.

CFR is the Code of Federal Regulations, which are the regulations of the United States government.

A **combustible** substance is a solid, liquid or gas that will burn.

A **corrosive** substance is a gas, liquid or solid that causes destruction of human skin or severe corrosion of containers.

The **critical temperature** is the temperature above which a gas cannot be liquefied, regardless of the pressure applied.

DEP is the New Jersey Department of Environmental Protection.

DOT is the Department of Transportation, the federal agency that regulates the transportation of chemicals.

EPA is the Environmental Protection Agency, the federal agency responsible for regulating environmental hazards.

ERG is the Emergency Response Guidebook. It is a guide for emergency responders for transportation emergencies involving hazardous substances.

Emergency Response Planning Guideline (ERPG) values provide estimates of concentration ranges where one reasonably might anticipate observing adverse effects.

A **fetus** is an unborn human or animal.

A **flammable** substance is a solid, liquid, vapor or gas that will ignite easily and burn rapidly.

The **flash point** is the temperature at which a liquid or solid gives off vapor that can form a flammable mixture with air.

IARC is the International Agency for Research on Cancer, a scientific group.

Ionization Potential is the amount of energy needed to remove an electron from an atom or molecule. It is measured in electron volts.

IRIS is the Integrated Risk Information System database on human health effects that may result from exposure to various chemicals, maintained by federal EPA.

LEL or Lower Explosive Limit, is the lowest concentration of a combustible substance (gas or vapor) in the air capable of continuing an explosion.

mg/m³ means milligrams of a chemical in a cubic meter of air. It is a measure of concentration (weight/volume).

A **mutagen** is a substance that causes mutations. A **mutation** is a change in the genetic material in a body cell. Mutations can lead to birth defects, miscarriages, or cancer.

NFPA is the National Fire Protection Association. It classifies substances according to their fire and explosion hazard.

NIOSH is the National Institute for Occupational Safety and Health. It tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes standards to OSHA.

NTP is the National Toxicology Program which tests chemicals and reviews evidence for cancer.

OSHA is the federal Occupational Safety and Health Administration, which adopts and enforces health and safety standards.

PEOSHA is the New Jersey Public Employees Occupational Safety and Health Act, which adopts and enforces health and safety standards in public workplaces.

Permeated is the movement of chemicals through protective materials.

ppm means parts of a substance per million parts of air. It is a measure of concentration by volume in air.

Protective Action Criteria (PAC) are values established by the Department of Energy and are based on AEGLs and ERPGs. They are used for emergency planning of chemical release events.

A **reactive** substance is a solid, liquid or gas that releases energy under certain conditions.

STEL is a Short Term Exposure Limit which is usually a 15-minute exposure that should not be exceeded at any time during a work day.

A **teratogen** is a substance that causes birth defects by damaging the fetus.

UEL or Upper Explosive Limit is the highest concentration in air above which there is too much fuel (gas or vapor) to begin a reaction or explosion.

Vapor Density is the ratio of the weight of a given volume of one gas to the weight of another (usually *Air*), at the same temperature and pressure.

The **vapor pressure** is a force exerted by the vapor in equilibrium with the solid or liquid phase of the same substance. The higher the vapor pressure the higher concentration of the substance in air.

Common Name: **NICKEL**

Synonyms: Nickel Catalyst; Pulverized Nickel; Raney Alloy; Raney Nickel

CAS No: 7440-02-0

Molecular Formula: Ni

RTK Substance No: 1341

Descriptions: **Nickel** is an odorless, silvery, hard, metallic solid; *Raney Nickel* is a finely powdered, grayish metal

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p>3 - Health</p> <p>4 - Fire</p> <p>1 - Reactivity</p> <p>DOT#: UN 2881 (Nickel catalyst, dry)</p> <p>ERG Guide #: 135</p> <p>Hazard Class: 4.1 (Flammable Solid)</p>	<p>Nickel powder and Raney Nickel are FLAMMABLE SOLIDS.</p> <p>Use dry sand, sodium chloride powder, graphite or an approved Class D extinguisher appropriate for extinguishing metal fires.</p> <p>DO NOT USE WATER directly on Nickel powder or Raney Nickel as flammable and explosive <i>Hydrogen gas</i> may be formed.</p> <p>DO NOT USE foam or CO₂ as extinguishing agents. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Nickel Carbonyl</i> and <i>Nickel Oxide</i>. CONTAINERS MAY EXPLODE IN FIRE.</p> <p>Use water spray to keep fire-exposed containers cool.</p> <p>Nickel powder and dust, and Raney Nickel, may form ignitable dust/air mixtures in closed tanks or containers.</p>	<p><i>Very fine Nickel powder and dust, and Raney Nickel</i>, react with AIR and can spontaneously ignite or produce flammable and explosive <i>Hydrogen gas</i>.</p> <p>Nickel powder and Raney Nickel react violently with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE) and STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC).</p> <p>Nickel powder reacts violently with TITANIUM POWDER; POTASSIUM PERCHLORATE; and AMMONIUM NITRATE to cause fire and explosions.</p> <p>Nickel is not compatible with ALUMINUM; AMMONIA; AMMONIUM NITRATE; BROMINE PENTAFLUORIDE; DIOXANE; HYDRAZINE; METHANOL; NITRYL FLUORIDE; ORGANIC SOLVENTS; PHOSPORUS; POTASSIUM PERCHLORATE; SELENIUM; and SULFUR.</p>

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Cover with dry earth or sand and place into sealed containers for disposal.

DO NOT wash into sewer.

Use only non-sparking tools and equipment.

Keep **Nickel powder and dust, and Raney Nickel**, out of confined spaces, such as sewers, because of the possibility of an explosion.

PHYSICAL PROPERTIES

Odor Threshold: Odorless

Flash Point: *Nickel powder and Raney Nickel* are Flammable

Vapor Pressure: 1 mm Hg at 3,290°F (1,810°C)

Specific Gravity: 8.9 (water = 1)

Water Solubility: Insoluble

Boiling Point: 4,946°F (2,730°C)

Melting Point: 2,651°F (1,455°C)

Molecular Weight: 58.7

EXPOSURE LIMITS

OSHA: 1 mg/m³, 8-hr TWA

NIOSH: 0.015 mg/m³, 10-hr TWA

ACGIH: 1.5 mg/m³, 8-hr TWA

IDLH: 10 mg/m³, 8-hr TWA

The Protective Action Criteria values are:
 PAC-1 = 4.5 mg/m³ PAC-2 = 10 mg/m³
 PAC-3 = 10 mg/m³

PROTECTIVE EQUIPMENT

Gloves: Nitrile and Neoprene

Coveralls: Tyvek®
Use turn out gear or flash protection if ignition/fire is the greatest hazard.

Respirator: Spill - full facepiece APR with *P100* cartridges
 Fire - SCBA

HEALTH EFFECTS

Eyes: Irritation and burns

Skin: Irritation and burns

Inhalation: Nose, throat and lung irritation with coughing, wheezing and shortness of breath
 Headache, dizziness, nausea and vomiting

Chronic: Cancer (lung) in humans and animals

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses.

Quickly remove contaminated clothing and wash contaminated skin with large amounts of soap and water.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer promptly to a medical facility.