



# NICKEL ALLERGY

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Nickel is a silvery-white metal that can be found in nature. It is usually mixed with other metals to produce alloys. For example, nickel-iron, which is used to manufacture stainless steel, is the most common nickel alloy. Other nickel alloys are used to make coins, costume jewelry (i.e., earrings, watchbands, rings, necklaces, necklace clasps, bracelets), bra or girdle fasteners, zippers, snaps, buttons, suspender clips, hair-pins, studs, eyeglass frames, pens, handles, utensils, paper clips, keys, and tools. Nickel is tightly bound up in stainless steel, especially surgical stainless steel.

As one can see, nickel is found in many common, everyday items. Although one may be exposed to nickel in the workplace environment (if working with nickel, or live near industries using nickel), it is much more likely for the general population to come into contact with nickel through direct skin contact.

This is important because nickel appears to be a very common cause of allergic skin rashes, with nickel allergy being more common among women than men. Apparently, ear piercing (and probably any body piercing, in general), which women are more likely to do than men (although this has been changing), has put susceptible individuals at greater risk of becoming more easily sensitized to nickel.

A nickel allergy is a reaction that develops after initial and/or brief, or repeated and/or prolonged, exposure to nickel or nickel-containing items, depending on the individual's susceptibility. Degree of reaction also varies by person. Specifically, nickel allergy is a contact allergy, which is an allergic skin reaction in response to being exposed to a contact allergen or irritant, such as nickel. A nickel allergy can occur at any age, and typically manifests a few days after first contact as eczema (allergic contact dermatitis), which appears as an itchy, dry/crusty, and red/pigmented skin rash with watery blisters. The affected area is usually restricted to the site of contact, although it could also be found on other parts of the body. Once a nickel allergy has developed, it is usually a chronic condition, often being life-long.

One can be tested for nickel allergy by going to a dermatologist for patch testing. Patch tests are safe skin test procedures, which involve the direct application of tiny quantities of several suspected contact allergens, to the skin of the upper back using hypoallergenic tape. The concentrations of these allergens are low so that they won't cause irritation or reactions in non-allergic individuals, but are high enough to cause a positive response in sensitive individuals. The allergens are in contact with the skin for 48 hours, undisturbed, and then examined at 48, hours after application. An individual is allergic to nickel (or other contact allergen) if a positive reaction is noted. However, patch tests may produce vague or unclear results that may require further examination. This means that sometimes, the cause cannot be determined.

If one is allergic or sensitive to nickel, the best thing to do is to discontinue, whenever possible, exposure to nickel and nickel-containing items. It appears that this is the closest thing there is to a cure.

Here are some precautions to follow to avoid nickel. For clothing, choose fasteners made of plastic, coated or painted metal, or some other material. A nickel allergy does not mean jewelry cannot be worn. One just has to be much more selective in choices -- make sure they are hypoallergenic, or made of stainless steel (although this contains nickel, it is so tightly bound that it cannot be leached out), solid gold (at least 12 carat), pure sterling silver, or polycarbonate plastic. However, if earrings must be worn that contain nickel, protect oneself with plastic covers made specifically for earring studs. Applying clear nail polish to earrings is another option of some use. Since perspiration dissolves nickel, some people have tried removing moisture by applying talcum powder to areas of the body in contact with nickel-containing items in the hopes of limiting the extent or degree of exposure. This is of little use.

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Regarding treatments the following are only temporary solutions to a nickel allergy, since they do not desensitize one to nickel. Some nickel allergy treatments include **topical steroids**, which must be used as directed by a dermatologist; compresses made of Burow's solution diluted with water, which help dry up blisters; and/or, emollient creams, which help alleviate the dryness and itch of dermatitis when frequently applied.

Finally, regardless of one's nickel allergy status and/or exposure to nickel, when having piercing of ears, or other body parts, have it done only with a stainless-steel needle. More importantly, make sure the first pair of earrings have stainless steel or high quality 18-karat gold studs, which is worn until the skin is completely healed. These precautions will help reduce the risk for developing a nickel allergy in the future.

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