

Contact Dermatitis Allergens

Top Ten Contact Dermatitis Allergens Identified

by Judy Tidwell

Almost anything that comes in contact with the skin can cause allergic contact dermatitis. It occurs when the body's immune system senses a known allergen and reacts to expel it. This skin reaction or inflammation usually manifests with swollen, red-ened and itchy skin.

Research conducted by the Mayo Clinic identified the most common causes of allergic contact dermatitis after examining contact dermatitis testing results from 3,854 patients over a five-year period between Jan. 1, 2001 and Dec. 31, 2005. The study also confirmed the standard panel of patch testing performed for contact dermatitis patients is useful in identifying common contact allergens.

The top ten contact dermatitis allergens identified in this study were:

- **Nickel (nickel sulfate hexahydrate)**

Nickel is found in many products. It can be found in jewelry, buckles, zippers, snaps, buttons, hairpins, and metal clips. Be aware that any metal product may contain nickel.

- **Gold (gold sodium thiosulfate)**

Gold is a precious metal often found in jewelry and also used in the dentistry field.

- **Balsam of Peru (myroxylon pereirae)**

Balsam of Peru originates from a tree resin and is used in fragrances, skin care products, flavoring in

foods, health and beauty aids, and medicinal creams and ointments. Not only is Balsam of Peru aromatic, but it delays evaporation and also acts as a mild antibacterial, antifungal and antiparasitic.

- **Thimerosal**

Thimerosal is a mercury compound used in local antiseptics and in vaccines. It is used as a preservative in many items such as cosmetics, pharmaceutical products, vaccines, and skin prict test antigens.

- **Neomycin sulfate**

Neomycin sulfate is an antibacterial used widely in first-aid or antibiotic creams and ointments, eye and ear preparations. It is also used in combination with other antibacterials corticosteroids. These combination preparations treat a variety of skin, eye, and ear infections.

- **Fragrance mix**

Fragrance mix is a screening agent that is used to pinpoint the cause of a large percentage of skin allergies. This fragrance mix contains eight known skin sensitizers which are found in foods, cosmetic products, insecticides, antiseptics, soaps, perfumes, and dental products.

- **Formaldehyde**

Formaldehyde is a chemical widely used in many building materials and household products. It is a preservative with multiple uses. Some of the sources of formaldehyde include paper products, paints, medications, household cleaners, cosmetic prod-

ucts and fabric finishes. It is impossible to list all the sources of formaldehyde exposure.

- **Cobalt chloride**

Cobalt chloride is a metal that is found in medical products such as Vitamin B12 preparations, metal prostheses and dental plates. It is also present in many metal plated objects such as snaps, button, or tools. Because cobalt pigment produces light brown shades of hair, it is used in hair dye. It can also be found in antiperspirant preparations. Cobalt blue pigment can be found in porcelain, glass, pottery, ceramics, enamels, and blue or green water colour paints and crayons.

- **Bacitracin**

Bacitracin is a topical antibiotic that is used for a variety of localized skin and eye infections.

- **Quaternium 15**

Quaternium 15 is a formaldehyde-releasing preservative found in cosmetics products such as eye make-up, foundations, powders. It can also be found in shampoos, soaps, self-tanners, baby powders, nail polish and sunscreen. Commercial and industrial products such as adhesives, floor waxes or polishes, latex paints, paperboard, laundry starch, and water based inks also may contain Quaternium.

Can Cause Minor Annoyance to More Severe Handicaps

Contact dermatitis is common among all age groups

and can cause minor annoyance to more severe handicaps, according to Mark Davis, M.D., Mayo Clinic dermatologist and lead study researcher. "Patients with contact dermatitis can get a very itchy rash from head to toe, or in a confined area," he says in a Mayo Clinic news release. "If it's on the hands and feet it can be disabling, and patients at times can't do their jobs."

Dr. Davis adds that even though allergen avoidance is the chief treatment for allergic contact dermatitis, there are times when corticosteroid creams are needed to treat the rashes. However, 3 percent of the patients with contact dermatitis are also allergic to topical steroids that could be used to treat their rashes and alleviate their symptoms.