

Your T.R.U.E. TEST results indicate that you have a contact allergy to ethylenediamine dihydrochloride. This contact allergy may cause your skin to react when it is exposed to this substance, although it may take several days for the symptoms to appear. Typical symptoms include redness, swelling, itching and fluid-filled blisters.

Ethylenediamine is a substance that is used to manufacture various drugs and industrial compounds. Ethylenediamine dihydrochloride is a colorless liquid that is used as a preservative, emulsifier and stabilizer in certain medical creams, cosmetics and a variety of other products.

WHERE IS ETHYLENEDIAMINE FOUND?

At work, you may find ethylenediamine used in the manufacture of:

- Bleach activators
- Drugs and polyamines
- Lubricants and waxes
- Metal-binding agents known as chelators
- Curing agents in epoxy resins and coatings
- Surfactants, emulsifiers and dispersants
- Binders for printing inks
- Urethane foam catalysts
- Textile dye-assist compounds
- Carbamates for fungicides and rubber additives
- Fuel additives and corrosion inhibitors

At home, you are unlikely to encounter ethylenediamine even though it has been used as a starting material to produce many drugs, laundry additives, fungicides and cured epoxy products.

Some antihistamines used in the treatment of asthma, hay fever, motion sickness and hives may cross react with ethylenediamine dihydrochloride. You may have a general skin reaction to these antihistamine drugs as well as to aminophylline drugs used for asthma, which may contain ethylenediamine dihydrochloride as an impurity.

Rarely, a few individuals with ethylenediamine allergies may develop skin reactions to some piperazine-related drugs, including some antihistamines. Talk to your doctor if you have any reactions to these medications.

You may be exposed to ethylenediamine dihydrochloride through industrial products such as solvents, textile resins, inhibitors, antifreezes, epoxy hardeners and coolant oils.

Water-based industrial products may contain ethylenediamine dihydrochloride as a fungicide. It is also a component of some dyes, insecticides and synthetic waxes.

HOW CAN YOU AVOID ETHYLENEDIAMINE?

- Avoid direct skin contact with chelators and the substances used to manufacture carbamates, epoxy resin curing agents, fuel additives and the other industrial products listed above.
- Do not use products that list ethylenediamine or related chemicals on the label, ingredient list or Material Safety Data Sheet (MSDS). If no information is available, contact the product manufacturer.
- Tell your physician, pharmacist, dentist and veterinarian that you are allergic to ethylenediamine. Ask for preparations that do not contain ethylenediamine or related substances.
- Wear protective gloves. Heavy-duty gloves made of natural or synthetic rubber or vinyl may be good for working with many potential sources of ethylenediamine.
- If you think that you contact ethylenediamine at work, ask your employer for MSDS or manufacturer information on the product(s). Talk to your employer about using a different product or about wearing protective gloves and clothing.

WHAT SHOULD YOU LOOK FOR AND AVOID?*

Avoid products with the following names in the list of ingredients, MSDS or package insert:

- Ethylenediamine dihydrochloride or 1,2-ethanediamine dihydrochloride, chlorethamine, dimethylenediamine dihydrochloride, ethylenediammonium chloride and 1,2-diaminoethane dihydrochloride

Ethylenediamine dihydrochloride-related substances that you may also react to:

- Diethylenetriamine (DETA)
- Triethylenetetramine (TETA)
- Dipropylenetriamine (DPTA)
- Tetraethylenepentamine (TEPA)
- Aminophylline
- Piperazine

Other related substances to which you may react:

- Aminophylline
- Buclizine
- Chlorcyclizine
- Cyclizine
- Hydroxyzine hydrochloride
- Epoxy resin catalysts (ethylenediamine and chemically related amines such as diethylenediamine, dipropylenetriamine, triethylenetetramine, tetraethylenetetramine, trimethylhexamethylenediamine)
- Meclizine
- Piperazine-based antihistamines
- Promethazine hydrochloride (HCl)
- Tripeleminamine

*These lists are brief and provide just a few examples. Read product labels carefully and talk to your doctor if you have any questions. Product formulations may change from time to time without notice. Talk to your doctor for specific instructions. For additional information about products that might contain **ethylenediamine dihydrochloride** or a related substance, go to the Household Products Database online (householdproducts.nlm.nih.gov) at the United States National Library of Medicine.