THE AUSTRALASIAN COLLEGE
OF DERMATOLOGISTS

Irritant Contact Dermatitis (ICD)

Also known as…Contact Dermatitis or Skin Irritation

What is irritant contact dermatitis (ICD)?

Dermatitis is a very common, itchy red skin rash with a variety of types and causes (some types are also called eczema). It is common for a person with dermatitis to have more than one type, either at the same time or at different times in their lives.

What causes ICD?

All forms of dermatitis are caused by particular types of attack by the immune system on the skin. Irritation is different to allergy.

Irritant contact dermatitis (ICD) is caused by repeated exposure to substances that aggravate the skin. Common examples of such substances are water (such as in repeated hand washing), soaps and detergents, acidic substances, solvents and other industrial chemicals. Repeated exposure to these substances over time causes a breakdown in the barrier function of the skin, so reduces the skin's ability to protect itself from these chemicals. As a result, redness, scaling, blistering and splitting are seen in irritant contact dermatitis.

Allergic contact dermatitis is different in that the immune system reacts specifically to contact with an outside protein or chemical (for example an allergy to latex gloves). Those with irritant hand dermatitis are more at risk of developing allergic contact dermatitis as the breakdown in the skin barrier function allows increased penetration of outside substances into the skin where they can make contact with the immune system.

What does ICD look like?

ICD in an industrial worker from repetitive chemical contact – image reproduced with permission of Dr Bruce Tate

Irritant contact dermatitis varies from a mild dry red slightly itchy and quite localised rash to a severe weeping or blistering (fluid filled bubbles) rash. Some people develop thicker skin prone to splitting. ICD occurs in the area where the offending chemical touches the skin. Any part of the skin can be affected. The hands and feet are commonly affected but ICD can occur on the face or elsewhere on the body. If the chemical is in contact with a large area of skin the rash may be extensive. Contact with strong chemicals such as some acids or alkalis, may cause a rash or chemical burn to appear quickly. On the other hand, repeated contact with milder chemicals may be required to trigger the dermatitis. Once the dermatitis is active, infrequent contact with the chemicals will keep it “grumbling along”. If the rash is worse during the working week and less on weekends or holidays, then a work-related cause may be suspected.

What other problems can occur with ICD?

Atopic dermatitis (AD), which is associated with the tendency to develop hay fever or asthma, also involves a reduced skin barrier so people with this form of dermatitis are more prone to developing ICD as well as other forms of dermatitis.

How is ICD diagnosed?

Allergy tests such as prick tests, RAST tests or patch tests do NOT determine irritation. There is no readily available test to identify chemical causes of ICD.

How is ICD treated?

Treatment of ICD requires identifying chemicals and physical factors likely to cause irritation and then avoiding exposure. This requires knowledge of where the offending chemicals are likely to be found.

Personal protective measures are an important part of treatment. These include gloves, shoes, appropriate clothing or aprons and safety glasses or goggles.

Barrier creams provide some protection. Certain chemicals are better able to penetrate certain gloves or barrier creams so specialist advice may be required. Sweating under gloves or shoes can also be irritating. The rash should slowly clear once exposure is avoided.

As people often have more than one type of dermatitis at the same time, avoiding irritants (or allergens)may only settle one part of the problem.

Regular use of greasy moisturisers is often beneficial.

Short showers, less frequent hand washing and sensible avoidance of soaps and detergents are also needed.

Cortisone creams (if sufficiently strong) or tablets will temporarily settle most cases of ACD.

Other measures may be needed such as therapy with ultraviolet light, special X-rays or certain medications.

What is the likely outcome of ICD?

The likely outcome depends on how easy it is to avoid irritating chemicals or physical factors. This may be difficult in occupations requiring a lot of wet work such as nursing, cleaning, hairdressing, food industries and metal turning. People with pre-existing atopic dermatitis commonly continue to be prone to ICD.

Further information on ICD

http://www.ccohs.ca/oshanswers/diseases/dermatitis.html

http://emedicine.medscape.com/article/1049353-overview

This information was written by Dr Bruce Tate