ALLERGY AND YOUR SKIN

Allergic responses of the skin can occur as a result of contact or ingestion of various substances. Some individuals have a genetic predisposition to allergic disease and this is called atopy.

In these individuals there is likely to be a family history of allergic disease such as eczema, asthma, hay fever. It is thought that 8-10% of the population suffers with eczema while around 25% of the population at some time in their lives will develop a rash or hives as a result of exposure to a food, medication, or chemical. Some forms of allergic skin disease are eczema, dermatitis, urticaria (hives), angioedema (localised swelling), pruritis (itching of the skin without a rash), wheals, vesicles (blisters), and scaling of the skin, with the most common forms being atopic eczema, dermatitis, urticaria, angioedema.

Eczema/Dermatitis (atopic and contact) is an inflammatory response of the skin on exposure to external and/or internal agents and can be due to either allergy or irritant mechanisms. Acute dermatitis causes the affected area of the skin to become reddened, swollen, itching, with itchy fluid filled blisters that can rupture and leave a weeping surface. Chronic dermatitis can lead to scaling and thickening of the skin.

Atopic Eczema is due to allergy mechanisms and individuals who get eczema have a tendency to react to a wide range of environmental substances. Eczema usually begins early in life with 87% of cases occurring by age five. Eczema in infancy and childhood is mostly caused by food allergy, usually milk, egg and soy. The rash may appear on the face and in the creases of the skin. However, if severe it can affect the whole body. While the severity of eczema tends to decrease after childhood, increased sensitivity and outbreaks of localised disease or occupational eczema are common.

Contact dermatitis occurs after skin contact with a substance or chemical found in cosmetics, perfume, jewelry, some fabrics and plants.

Allergic Contact Dermatitis occurs following sensitisation and re-exposure to things such as some plants, nickel in jewelry, chromates in paints, rubber compounds, perfumes, clothing, antibiotics, antiseptics, house dust mite etc. skin reactions are usually confined to the site of contact.

Photoallergic and Phototoxic Contact Dermatitis *occurs* on exposure to sunlight following application of certain chemicals to the skin e.g. aftershave, sunscreens, topical sulfonamides, some perfumes, coal tar compounds in cosmetics and hair dyes, psoralens and cutting oils. It manifests as an exaggerated response to sunlight with areas of redness, dermatitis or rashes, blisters and chronic thickening of the skin and may occur after only a few minutes of exposure.

Urticaria and Angioedema or hives are itchy, raised lumps. The onset is sudden and the rash is small. It consists of itchy spots that look like mosquito bites that may develop into larger itchy welts. The itching may be severe and painful with the discomfort sufficient enough to disrupt sleep and keep and individual from working.

Angioedema is a deeper swelling under the skin, usually occurring in the areas of the face, and mucous membranes involving lips and tongue. If angioedema involves the upper respiratory tract, life threatening obstruction to breathing may occur.

Urticaria is common in children and usually lasts from a few hours to 6 weeks. However, the condition may become chronic and last longer than 6 weeks. Urticaria of an allergic nature can cause severe and dramatic symptoms within a few minutes or a few hours of exposure and disappear within 24 hours. Acute urticaria and angioedema are common symptoms of food allergy and can occur after a) ingestion of very small amounts of allergen in the case of allergy, or, b) after overindulgence in a specific food e.g. strawberries. Skin contact with foods can also cause hives. Chronic urticaria occurs in both atopic and non-atopic individuals and may be due to chronic ingestion of an aggravating chemical e.g. antibiotics in milk, preservatives, or other food additives.

THINGS THAT CAUSE SKIN REACTIONS

Foods And Food Components

Dietary allergens – nuts, dairy foods, soy, wheat, peanuts, shellfish, eggs.

Naturally occurring food chemicals – salicylates, amines, MSG.

Food additives – preservatives, colourings such as tartrazine, benzoates, antioxidants, sulphites, MSG.

Irritant substances in food – paprika, caffeine.

Histamine - release from foods e.g. egg white and strawberry.

Vasoactive amines – wine, cheese, bananas, avocados, chocolate, citrus fruits.

Vitamins – thiamin, folic acid.

Plants

poison ivy, ragweed, pine trees, primrose, desert heliotrope, sagebrush, chrysanthemums,

timber, nettle.

Animal Bites And Stings

bees, wasps, snake venom.

Airborne allergens

House dust mite, animal dander, pollen, mould.

Cosmetics and personal products

Cosmetics and hair dyes – coal tar.

Sunscreens – PABA.

Perfumes – Balsam of Peru, wood tars, benzyle salicylate, phenylacetaldehyde.

Preservatives in cosmetics and medications – sodium benzoate, phenylanadiamine, ethylenediamine, captan, immazolidinyl urea, paraben.

Toothpaste, mouthwash, chewing gum – cinnamic aldehyde.

Soaps – alkyl sodium sulphate, sodium laurel sulphate, dioctyl sodium, sulphosuccinate,

sodium oleate, benzethonium chloride, cetylpyridinum chloride.

Vaccines – pertussis, typhoid.

Drugs – Aspirin, NSAIDS.

Antibiotics – penicillin, tetracycline, neomycin.

Medications – Benzocaine (local anaesthetic), thiomersal (antiseptic), ethylenediamine hydrochloride (antihistamines, antifungal creams), mercury (skin ointments).

Infections – some microbes in particular viral infections.

Latex rubber products – gloves, toys, balloons, condoms, diaphragms, dental dams.

Metals

Nickel sulphate – jewelry, coins, belt buckles, door handles, glues.

Gold – jewelry, dinnerware, coins, dental amalgam.

Household Products

Cleaning products – Alkalis, formaldehyde.

Plastics – Toluene, APE's, cadmium.

Adhesives – glues, epoxy resin, resins,

Pesticides, insecticides, fungicides – 2,4-D, dioxins.

Paints – cobalt, chromate, acrylic monomers.

FACTORS THAT MAY AGGRAVATE SKIN DISORDERS are scratching, dry skin, heat, wool, nylon and acrylic fibres, sand pits, viral infections, skin infections with bacteria e.g. staphylococcus aureaus, food allergy, food irritants e.g. citrus, vegemite, tomatoes, climate changes, soap, chlorinated swimming pool water, stress can make a rash worse but eczema is not a psychological problem.

TESTS THAT ARE HELPFUL TO DIAGNOSE ALLERGIC SKIN DISEASE are skin prick tests, patch testing and an elimination diet if food and food additives are involved. Measurement of total IgE levels can be estimated from a blood sample but while this is not always high in people with allergic disease it is often elevated in people with eczema. Eosinophil (white blood cells that kill worms and parasites) count is sometimes high in people with hay fever, asthma and atopic eczema as eosinophils are involved in inflammation during an allergic reaction. RAST tests are blood tests that identify reactions to specific allergens e.g. dust mite, pollen, mould, foods and some insect venom. In general RAST tests are less accurate than skin prick tests.

PREVENTION AND MANAGEMENT OF SKIN REACTIONS. As with any form of allergic disease identification of offending substances is paramount. Once triggers are identified, a management program to avoid triggers should be put in place. Once a skin rash has occurred, it is important for the rash not to come into contact with soap and it may be necessary to use sorbolene or aqueous cream when washing. If the rash is very severe it may be necessary to

wear white cotton clothing to ensure that the rash does not come into contact with dyes or synthetic materials that may worsen the condition.

Need to take a medication? If a medication is triggering a rash, a more suitable medication must be found. When medications are prescribed, any information about allergic reactions should be conveyed to the health care practitioner. While corticosteroids are the drug of choice for rashes, these may not work in some cases.

Foods and food additives. If these are causing skin rashes they need to be avoided. It is always best to prepare your own food from fresh whole food sources. that way you can avoid hidden sources of foods and additives. If a lot of foods are involved, it is always best to seek professional advice to ensure a balanced diet. This is particularly essential if the sufferer is an infant. There are some low allergenic formulas for babies with allergic disease.

Things you can do

Maintain good skin hygiene, avoid triggers, avoid stress as it can make symptoms worse, avoid wearing heavy or irritating fabrics such as wool or synthetic fabrics, avoid other potentially irritating substances such as perfumes, soaps, chemicals. Frequent bathing, moisturising lotions, creams or ointments are often recommended. An ice pack is useful for reducing itch.

WHERE TO GO FOR HELP…

If you suspect you have allergic skin disease you should contact your health care practitioner to confirm the diagnosis. A GP may refer you to an allergist, dermatologist, or an allergy dietitian.

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Is there a connection between your chronic medical condition and Allergy, Food Intolerance or Chemical Sensitivity?

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