

Allergy/Hypersensitivity

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This is a hypersensitivity reaction to one or possibly more constituents of the environment. An immunological reaction to an external allergenic substance.

There are 4 recorded types.

Type 1 (Anaphylaxis)

This is the most common and occurs within 2 hours of re-exposure to the allergen.

These cause:

- 1 Vasodilation leading to oedema
2. Redness or rash
3. Muscular spasm especially of the bronchioles
- 4 Increased mucous production

The symptoms may be systemic and generalized or local. Bronchial constriction (Asthma), arthritis, digestive cramps, eczema, headache, hives, loss of concentration, loss of memory, Nasal congestion and urticaria.

In some people this is an almost immediate response to certain allergens such as bee stings or seafood.

Adrenalin needs to be administered immediately to reduce swelling of the airways and reduce the allergic response.

Type 11 (Cytolytic)

This is the result of immunoglobulins G +M against antigens that are bound to other cells.

The classic example of this type of reaction is that of the incompatible blood transfusion.

75% of all food allergy reactions are to some degree a cytotoxic reaction.

Type 111 (Immune complex)

This type forms when an antibody binds with an antigen and cause agglutination and precipitation.

If small it may become trapped in the lining of the blood vessel where it activates complement enzymes and causes an inflammatory response.

This may cause diseases like Glomerular Nephritis, Rheumatoid Arthritis and Systemic Lupus Erythematosus.

About 80% of food allergy reactions involve some degree of Type 111 hypersensitivity.

Type 1V (Cell mediated)

This is a delayed reaction mediated by T lymphocytes. Allergens entering the body are engulfed by the macrophages and presented to the T cell in the lymph nodes. T cells are primed for that particular antigen and will proliferate in 36 -72 hours. This type of exposure leads to an inflammatory response.

Transplant rejection, the skin test for TB and contact Dermatitis are examples of Type 1V reactions.

Anybody can be allergic to anything and in today's stressful world, 60% of the population suffer from some type of allergy. As we subject our bodies to ever more increasing stress this figure will rise.

Allergic predisposition can be inherited from one or both parents. Common allergic conditions that are known to be inherited are Asthma, Eczema and Hay fever. Someone who presents with one or more of these problems, is said to be atopic, and a strong family incidence is often present although the form may skip between generations or even miss a generation.

Atopic patients may have a great many more helper cells and therefore react much more quickly to low levels of an antigen. They usually have low levels of digestive enzymes in the gut and have faulty immunoglobulin A in the gut lining cells which also aid easier entry of allergens into the blood stream.

Any factors which lower immune resistance will predispose to allergies. Stress (both emotional & physical), tobacco, recreational drugs, poor nutrition (using a high quantity of artificial and over foods. Children are introduced to foods that their bodies are unable to deal with far too early these days. Parents are very keen to wean babies as early as possible before the integrity of the gut lining is sufficiently equipped to deal with them. Ideally a baby should be weaned onto gluten free foods, fruits and vegetables and should not receive cows milk or wheat until over a year old.

In adults many digestive problems prevent adequate breakdown of protein which may allow large protein molecules to enter the bloodstream and initiate an allergic response. A deficiency of Hydrochloric Acid in the stomach, inflammation of stomach or intestines, abnormal gut bacteria, pancreatic deficiency, Vitamin A deficiency may all be contributory factors.

Other factors than the Immune system can play a part, some adverse reactions may be due to the following :

- 1.Excessive intake of histamine containing foods e.g. chocolate, dairy products, eggs, fruits such as banana and papaya, shellfish, strawberries and tomatoes.
- 2.Excessive intake of foods containing vaso-active substances e.g. bananas, cabbage, cheese, chocolate, citrus fruit, and potatoes.

General Symptoms of Food Allergy.

Cardio-vascular System: Arrhythmias (abnormalities of Cardiac rhythm), Fainting & Oedema (excessive accumulation of fluid in the tissue spaces).

Digestive Tract: Bloating, Diarrhoea, Gas, Irritable Bowel Syndrome, duodenal and gastric)

Malabsorption, Ulcers (both

Immune System: Chronic Infections and Swollen Glands.

Musculo-Skeletal System: Bursitis, Rheumatoid Arthritis.

Nervous System: Anxiety, Depression, Hyperactivity, Hypersomnia, Insomnia, Irritability, Lethargy, Migraines, Mood Swings, Poor memory, Reduced Concentration.

Respiratory System: Asthma, Coughing, Ear Aches, Ear infections, Sinus Congestion and Wheezing.

Skin : Acne, Dark Circles Under Eyes, Eczema, Hives and rashes.

Urinary Tract :Bed Wetting, Chronic Urinary Infections, Incontinence.

Allergies are extremely difficult to diagnose because after the initial acute reaction to the allergen, and subsequent repeated exposures, the body will adapt so that the patient feels their state of health is returned to normal. At times the ingestion of the allergen may actually relieve symptoms and there are many food cravings and an addiction to the allergen. An alteration of brain chemistry persuades the patient that the allergen is actually making them feel well. What it is actually doing is prolonging the problem.

Allergy Testing

There are many types of allergy testing available on the market at the present. A review of them is listed below.

1. Cytotoxic Test

A blood test that involves observing the white blood cells under a microscope after exposure to certain foods. This test is subjective and therefore not very reliable.

2. Enzyme Linked Immuno Sorbent Assay. (E.L.I.S.A.)

Again a blood test that measures Ig G (gamma G globulin) as it binds with enzymes in the blood after exposure to allergens. Accurate for measuring delayed hypersensitivity reactions that occur 2 - 24 hours after ingestion.

3. Food Immune Complex Assay. (F.I.C.A.)

Again a blood test that measures the amount of food molecules bound to antibodies. Not easily available, expensive and about 50% accurate.

4. Kinesiology.

This test believes certain muscles in the body are aligned on meridians and are affected by allergens in that the muscle loses strength if an allergen has been ingested. There are no scientific explanations for this test and although widely used it is subjective and result accuracy depends very much on the integrity

of the practitioner.

5. Skin Prick testing.

Here the surface of the skin is scratched or pricked and the test allergen is introduced subdermally.

Interaction of the allergen with immunoglobulin E, will produce an inflammatory response that is visible almost immediately. Although fairly good at testing allergy to inhalants, it is not very accurate at determining reactions to food substances and is most uncomfortable for the recipient.

6. Vega testing.

Called Electro acupuncture, this method has been widely used in Europe for some time. A system of positive and negative electrodes it claims it is possible to measure currents in the body (in the meridians) that alter on exposure to the allergen. Practitioners who use this system claim it is very accurate, cheap

and painless. No properly objective trials have been carried out so it is impossible to determine its accuracy.

7. Challenge testing.

You can do this testing yourself at home, and provided you follow the simple instructions and take time to do the testing and record the results it can be most accurate in measuring your individual reaction to certain foods. It is not however suitable for testing airborne allergens.

It is best to start the testing with a fast as this prevents reactions to various foods to cloud the results.

Fasting for 3 days is a good start and the day prior to the end of the fast, sit quietly and record your resting pulse. Do this for one whole minute and repeat this exercise several times to obtain a true picture of the resting pulse. The following day, take your pulse again and introduce one small mouthful of food you are testing and chew well and swallow. Take the pulse again for 1 minute at 1, 5, 10 and 20 minute intervals. If the pulse rises by more than 5 beats per minute above the resting pulse rate this indicates an allergic response. If no rise in rate occurs within the 20 minutes you may assume the food is safe. Most people have a fair idea of what foods can be causing them a problem and although this is rather labour and time intensive it is worth trying. If no rise in pulse occurs in the 20minutes, you may safely go onto the next food. Testing a few items each time is probably the most accurate way of doing things and please do not smoke or drink tea, coffee or coca cola whilst testing as both nicotine and caffeine raises the pulse rate.

Nutritional Supplements.

Supplements may be useful in your diet and include:

Vitamin C - This is the most important Vitamin to the Immune system and for the health of every tissue in the body. Vitamin C is water soluble so our bodies are unable to store it and for this reason it is required on a regular basis.

Vitamin E. Is a powerful antioxidant and although fat soluble, 70% of intake is excreted in the faeces daily.

Do not take supplements of Vitamin E if you are taking anticoagulants (e.g. Warfarin) as Vit.E is a natural anticoagulant.

Selenium. A antioxidant trace element. Works well with Vitamin E. Required for a healthy Immune system.

Evening Primrose Oil. Provides essential fatty acids (EFA's) which can be converted to Gamma linolenic acid in the body which are anti-allergenic and anti-inflammatory.

There are also certain Amino Acids that could be considered but they should not be supplemented without medical supervision.

Herbal Remedies.

Herbal remedies will not work against allergies. What they can do is strengthen the Immune system and help as a symptomatic treatment whilst identifying and removing the allergen.

Many herbs are useful as is a rotation diet for people with multiple allergies. Please contact me if I can help you with these.

Exercise.

Aerobic exercise is a great Immune System Booster because of the improved blood flow and increased oxygenation of the blood. 20 minutes exercise x 3 times weekly is a good place to start.