

UNDERSTANDING FOOD ALLERGIES

Dedicated to our food allergic patients

Mark Welch, D.O., F.A.O.C.O.

Introduction

The reason this booklet came about was to arm you, the food allergic individual, with the understanding of food hypersensitivities and how it relates and impacts the status of your health. In order for you as a patient to be motivated to implement a change in your diet, you must first understand the basic components of how foods effect your immune system. Once you achieve this understanding you are now in control of your symptoms! The understanding allows you to manipulate the amount and frequency of various foods to relieve and control chronic perhaps life-long symptoms.

Symptoms of food allergies:

It has been estimated that food hypersensitivity reactions occurs in up to 33% of adults and in up to 8% of children. Often when patients are aware of the various manifestations that food allergies can present with, they begin to entertain the notion that perhaps food allergies are indeed playing a part in the production of their symptoms. It is important to point out that not all of the following symptoms are necessarily caused by food allergies. However, many patients have been labeled incorrectly as psychosomatic, or have been previously written off by other doctors as hopeless. Other patients simply are being treated with various medicines in an attempt to control the symptoms with no real effort to find the root of the problem. It is in these not so uncommon instances that food allergies should be considered in the workup of the following symptoms.

General symptoms:

1. Chronic fatigue
2. Swelling of the ankles, fingers, lips, face and eyelids
3. Fluctuation in weight

Gastrointestinal symptoms:

1. Belching
2. Cramps
3. Gas and increased bowel sounds
4. Intermittent diarrhea or alternating diarrhea and constipation (Irritable Bowel Syndrome)
5. Acid indigestion or stomach pain
6. Fatigue after eating

Skin symptoms:

1. Burning
2. Itching
3. Hives
4. Drying, cracking and scabbing (eczema)
5. Pain and swelling
6. Welts and whelps

Ear symptoms:

1. Frequent ear infections
2. Itching
3. Fullness or pressure
4. Popping or ringing
5. Balance problems
6. Pain or clicking

Eye symptoms:

1. Itching
2. Burning
3. Blurring of vision
4. Tearing
5. Redness

Nasal symptoms:

1. Itching
2. Sneezing
3. Chronic blowing and sniffing
4. Runny nose
5. Congestion or blockage of breathing
6. Frequent colds or "sinus" infections

Throat symptoms:

1. Itching
2. Sore throats
3. Feeling of a lump in the throat
4. Chocking and constant throat clearing
5. Clicking
6. Recurrent cold sores or mouth ulcers
7. Hoarseness
8. Cough

Lung symptoms:

1. Shortness of breath
2. Wheezing (asthma)
3. Cough that is dry

Central Nervous System symptoms:

1. Headaches (migraines, tension, sinus)
2. Inability to concentrate
3. Hyperactivity (especially in children) and learning disabilities
4. Confusion and memory loss
5. Personality change (mood swings, crying, depression)
6. Insomnia

Muscle and Joint symptoms:

1. Swelling
2. Pain and tightness
3. Heat
4. Twitching, jerking or spasms

Types of Food allergies

Food allergies can be broken down quite simply into two different types

- 1. Immediate onset (IgE-mediated)** – this is the **most severe** and fortunately the **least common** type of food allergy. This type of food allergy is usually obvious, and can be easily diagnosed by reliable blood tests.

This type of food allergy exist because the patient has what is called an antibody to a particular food harmless substance (such has peanut) and has mounted an immune response to protect its host (the patient) from what it perceives as a foreign invader (even though it is really harmless). The next time the patient ingests that particular food an exaggerated immune response is known as Immediate or Type I Hypersensitivity Reaction. The type of antibody that is formed is an immunoglobulin (Ig) known as immunoglobulin E (IgE). This immediate type of sensitivity or IgE-mediated reaction is also what causes symptoms to occur upon exposure in inhalant allergy such as ragweed or dust.

Fortunately this type of food allergy is rare accounting for less than 5% of all food allergies and the only available treatment is to avoid the offending food on a permanent basis.

- 2. Delayed onset (IgG –mediated)** – this type of food allergy is by far and away the **most common** type of food allergy accounting for approximately 95% of all food hypersensitivities. Unfortunately, it is also the most difficult to diagnose and one of the least understood of all clinical diseases by physicians and even allergists. The type of antibody that is formed is called an intradermal provocative food antibody. When these antibodies form complexes with the food at you are allergic to, these complexes deposit in various organs and systems within your body causing symptoms to occur. These symptoms do not occur immediately, but can be 6, 8, 12, 24 hours or later to develop. Because there is not an immediate or perceived “cause and effect” relationship to the food ingested, many patients never suspect that the foods they are eating on a daily or weekly basis are causing the same symptoms from which they seek relief. That is what is known as Delayed or Type II or III Hypersensitivity Reaction

Stages of Delayed Food Allergies

The concept of delayed food allergies were discovered I the late 1930's and 1940's with further work done in the 1950's. Unfortunately, unlike immediate food hypersensitivity, no reliable blood or easy tests are available to make the diagnosis of delayed food hypersensitivity. There are however, reliable ways to make the diagnosis, but this requires motivation on the part of you, the patient. The work, although challenging, is often worth eh time and energy spent.

Most people eat the same foods day in and ay out without realizing it. This is because certain foods are “hidden” and chronic otitis media with effusions in different forms. The best examples of hidden foods that are in the daily American diet include eggs, milk, wheat, corn, soy and yeast. Properly educated, it becomes easy for you as the patient to identify these substances as potential allergens.

Stage 1: Masked Sensitization: When you, as the food allergic individual develop a sensitization (develop antibodies to a particular food) to a food you have frequently consumed, you are in state of chronic disease. During this stage, your symptoms are present on a year-round, perhaps daily basis. Your symptoms are due to the continued formation of IgG antibodies that are continuing to form as long as you are eating the food you are allergic to. These antibodies form immune complexes with the food it perceives as foreign. These immune complexes then deposit in t he various organ systems mentioned above causing symptom production. If your target organ is the skin, you may experience eczema, hives or chronic dryness and itching of the skin. If your target organ is the blood vessels of the brain, you may experience migraine headaches and so on and so forth. What you don't experience however, is an immediate “cause and effect” from the food you are eating. In fact, much of the time the food you are allergic to is a food that you crave (chocolate, coffee, milk, etc.). The reason for this because eating the food which will later increase your symptom, will temporarily make you feel

better. This phenomenon is called **Masking**. Masking can be explained by the fact that you eat a small portion of the food you are allergic to an intracellular component called Prostaglandin E (PGE) is produced. PGE functions to decrease your symptoms by changing the ability of the immune complexes to deposit in the target organ system. This response is only temporary and symptoms often worsen hours after eating. The attempt by you as the patient to feel better by eating the food you are allergic to is known as **food addiction** or **food craving**.

Stage II: Hyperacute Sensitization: During this stage, you have accepted the fact that food allergy may be causing your symptoms and you are ready to assist in making the diagnosis. In order to make the diagnosis, a detailed diet history and review of your eating habits has already been performed. During this process, we have identified one or more foods eaten by you on a routine basis that we suspect may be causing your symptoms.

It takes four (4) days for your body to clear itself of the food that your allergic to or have been sensitized to. If you completely avoid the food that we are suspicious of for four (4) days, the IgG antibodies are now in your circulation without the food allergen to form immune complexes with. You still have the same number of IgG antibodies after four (4) days, but there are no longer any food allergens available for them to bind with. This makes them "hungry". On day five (5), we will test the food we are suspicious of in its pure form. For instance, if we are testing for wheat, you would consume 1 portion of Cream of Wheat, cooked in spring water and perhaps a little salt on an empty stomach shortly after arising. If wheat is indeed causing symptoms, you will notice an exaggerated immune response unlike that you have experienced before when eating wheat. This exaggerated response will be an immediate (within the first hour) onset of symptoms. These symptoms should represent your normal symptoms (headache for example) but in an exaggerated and more immediate fashion. This test is called the **Oral Challenge Test** and is the gold standard for making the diagnosis of delayed or IgG-mediated food allergies.

While the Oral Challenge Test is the gold standard, it is time-consuming, tedious, and labor intensive allowing us to only test for one food at a time.

The other test we will cover in this booklet is a skin testing technique called Intradermal Progressive Dilutional Food Testing (IDPFT). IDPFT allows for testing of multiple foods at the same time, and also allows us to make a determination of how sensitive you are to the food you are allergic to. Knowing how sensitive you are to a particular food assists us in a process called Neutralization (keep reading, there is hope.)

Treatment of Delayed Food Allergies:

Rotary Diversified Diet: Ultimately, the best way to treat known delayed food allergies and to start feeling better is to temporarily avoid them completely. After a period of 3-6 months of complete avoidance, **tolerance** will develop. Tolerance is due to a decrease in the number of circulating IgG you are allergic to. After you have achieved tolerance, you may then rotate the food you are allergic to back into your diet, but only in small quantities, **and no more frequently than every four (4) days**. This is the basis for the **Rotary Diversified Diet**.

The reason you are food sensitive to begin with is due to the fact that you are habitual eater, meaning that you eat the same foods over and over again. This continued, repetitive exposure to these foods coupled with the fact that you have been genetically predisposed to the development of allergies, is the major cause of food allergies. **Therefore, the treatment of this disease, and to make sure you do not develop further or new food allergies, is to not repeat or eat the same food more than once every four (4) days**. Because you are predisposed to the development of food allergies, you are repetitiously eating the food that you consider as "safe", you will eventually develop a sensitivity to that food. An example would be a person who has a milk allergy. This patient currently ultrasound not allergic to soy, so they substitute soy milk on a daily basis. After a period of time of repetitious consumption, an allergy to soy develops.

You will need to learn to diversify your dietary intake and to rotate foods from the same food family. You can no longer have potatoes and beef every single day! You can have potatoes

on Monday, but should stay away from them again until Friday. As another example, you can have beef on Monday, chicken on Tuesday, turkey on Wednesday, pork on Thursday, and then beef again on Friday. An example of a 4 day rotation diet along with several of the major food families and other names of various hidden foods are included at the end of this booklet.

Nutrition

Management of nutrition is important when elimination and substitution diets are implemented. It is important to identify and replace key nutrients that may be getting left out, both in children and adults alike. Because major minerals (magnesium, phosphorous, iron etc.) are abundantly present in a wide variety of foods, mineral depletion should seldom be of concern. However, often questions arise particularly regarding the omission of milk from the diet and the concerns for the depletion of calcium. All growing children who are on a dairy free or dairy restricted diet should take an inexpensive calcium supplement. Many adults (especially women) are also not getting enough calcium. With regard to recommended daily allowances of key vitamins and minerals, our office will be happy to refer you to a nutritionist, as we do not want to imply we are experts in this particular area. It is important to keep in mind that the nutritional value of the foods that you are allergic to are offset by the detrimental effects of the symptoms they cause. Therefore, every attempt should be made to follow the diversified rotary diet and to replace the key nutritional components through alternative food sources. Remember, we want you to eat a variety on a rotary basis of fresh, unprocessed fruits, vegetables and protein (meat, poultry, seafood, nuts, etc.) along with adequate fiber and water. By eating this way, you are eating much healthier and nutritiously than if you were eating packaged, processed foods.

Summary

Clinically true food allergies exist in two forms: **1. fixed**, and **2. delayed reactions**. Treatment of **fixed (immediate) or IgE-mediated food allergies** is always permanent life-long avoidance. To reintroduce a food to your body you know causes a reaction is foolish and may be life-threatening. If you know you have a severe or have had a life threatening reaction to a common food, you should carry a self injectable epinephrine pen (preferably with two doses) in addition to avoidance of the food.

The most common type of food allergy is the delayed or IgG-mediated reaction. Once treated, the best way to keep these reactions and chronic symptoms from returning, and in order to avoid the formation of new food allergies, **the four (4) day diversified rotary diet should be instituted.** When necessary, this diet can be combined with neutralization therapy.

- Concentrate on the basics and try to keep meals simple
- use a variety of fresh fruits, vegetables, meats, poultry, fish, etc.
- request sauces and dressings be served on the side
- try new foods and be open minded
- concentrate on food that are allowed rather than foods you must omit
- read labels and ask questions about food content and the way the food was prepared
- list foods that must be avoided if any
- list foods that must be limited and have substitutions identified
- forego traditional foods that you eat for breakfast, lunch and dinner

Alternative Foods (substitutes)

Milk: beverages made from soy, rice and nuts

Wheat: pasta made from rice, corn or buckwheat

Bread made from millet, soy or rice

Flours and grains: Amaranth, barley, buckwheat, corn, oat, potato, rice, rye, soy, quinoa and tapioca

Foods recommended for Oral Challenges:

Milk: milk, plain yogurt

Corn: corn on the cob, canned corn

Wheat: cream of wheat cereal

Egg: poached or boiled egg

Yeasts: bread (if wheat allergy has been ruled out) or baker's yeast powder in water

Other names for hidden foods:

Milk: whey, casein, caseinate

Wheat: cereal extract, Graham flour, bran

Egg: ovoglobulin, albumin, ovo-mucin

Corn: dextrose, corn starch, corn syrup