The Ultimate Food Allergy Cookbook and Survival Guide

How to Cook with Ease for
a Food Allergy Diet
and Recover Good Health

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Survival

In My Fair Lady, Henry Higgins says, "Speech separates class from class and soul from soul." If you have food allergies, you know that allergies are also a divisive and isolating force in our society. On holidays and special occasions you watch the people around you partake of sumptuous feasts while your plate contains very little, and those few items may be foods that no one recognizes. Even the most polite individuals look at you askance, while others think (and say) that you are downright neurotic. Indeed, the pressure of constant malnourishment and continual allergic reactions can make you wonder if you are losing your mind.

People with food allergies are also separated from those around them by weight problems. Those who are underweight are "obviously" malnourished, but overweight people with food allergies are also malnourished. Their bodies are crying out for missing nutrients or craving a fix with allergic foods, and this, not lack of self-control, is why they are obese.

In 1991, I was diagnosed with Crohn's disease, an inflammatory bowel disease that often necessitates repeated surgical removal of parts of the patient's small intestine. I was told that the condition was incurable. I had food allergies for many years before this. While I could not eat much "normal" food, prior to the Crohn's disease my diet was adequate. I ate most vegetables and fruits, non-grains such as amaranth and quinoa, goat and sheep dairy products, legumes, nuts, and game meats. The Crohn's disease began a downward spiral in my health and diet until I was literally allergic to all food. I ate only exotic fish and exotic starches such as malanga, cassava, lotus, and true yam. I reacted somewhat to even those foods. I could eat no vegetables or fruits and was emaciated and malnourished.

By the grace of God I was led to the information and treatments in this book and I survived. I am now back to being well nourished. I can eat most vegetables and fruits, game meat (and even some "normal" meat like turkey), grain alternatives, nuts, and occasionally some goat milk products. I have enough energy to do what I want to do. My weight is normal and my cheeks are rosy. I feel as if I have been given my life back. I am optimistic about making further progress.

This book is the outgrowth of my journey back from near starvation. In it you will find out how you too can make that journey back to better health.

Hope

A speaker once said that we can live a few weeks without food, a few days without water, a few minutes without air, but only a few seconds without hope. Hope is indeed essential to life, to living rather than just surviving or existing.

Some people with food allergies discover what they are allergic to, avoid those foods, and by practicing avoidance faithfully, enjoy stable health for the rest of their lives. Some avoid their problem foods for a time, and then their allergies improve to the point that they can eat freely again. Yet others develop allergies to more and more foods as time goes on regardless of how faithful they are about their diets.

I was once involved in a discussion on how to prevent the development of new food allergies. One person said that using a rotation diet and not eating any one food too often was the way to keep from developing more allergies. Another said that rotation diets could lead to eating single foods in large quantities, and that eating too much of any food could cause one to become allergic to it. Finally someone asked, "So what will prevent the development of more food allergies?" The answer given was, "Death!" This does indeed seem to be the situation for some people – a situation without hope.

The purpose of this book is to give you hope. Just as a rainbow comes after the rain, so too can you enjoy good health again. By treating the underlying root causes of your food allergies, you may become healthier than you have ever been before. It might not be a quick process, and most of the time you will eat differently from those around you (at least at first), but you can again be healthy enough to enjoy your activities, friends, and family. You can truly live again rather than just survive.

Cicero said, "While there is life, there is hope." Our bodies were designed to heal themselves. As long as we have life, if we tip the balance in favor of the healing process, our bodies will heal. We are amazingly resilient creatures. Our Creator has not left us in the midst of our problems alone. The Psalmist said of God, "My hope is in Thee."[1] The Source of all life is the One who gives us hope and leads us through the process of restoring health to our bodies.

Footnotes

1. Psalm 39:7.

All About Food Allergies

What Are Food Allergies?

When the term "allergy" was first coined, it meant an adverse reaction to any substance that does not bother most people. Then, in the 1920's, it was discovered that a type of antibody called "Reagin" or IgE was involved in many allergic reactions, especially those to inhalants. So conventional medicine defined allergy as an IgE-mediated response.

IgE-mediated allergies are easily detected by standard blood or skin tests. The reactions happen rapidly, usually within a few minutes of exposure to inhaled substances or eating a food. Small amounts of the offending substance trigger the reactions, which commonly occur in the respiratory tract, digestive system, or skin. IgE-mediated food reactions are often "fixed." This means that after months or years of avoiding a problem food, eating any amount of it will still cause symptoms.

Many adverse reactions to foods do not involve IgE antibodies. They are often called food "sensitivities" or "intolerances." The absence of IgE does not make them any less real; other immune mechanisms, such as IgG antibodies, immune complexes, or cell-mediated reactions are involved instead. These reactions can happen quickly or can be delayed for two to seventy-two hours or longer. This makes home challenge testing for them much more difficult. (See page 6 for an explanation of this kind of testing). However, there are tests which are performed on "live patients" (in vivo testing) in a doctor's office which can diagnose food allergies, and blood tests can detect the antibodies that may be involved in causing allergic reactions. Standard IgE-based blood tests and skin tests are often negative. Virtually any part of the body can be affected by these types of allergies. About 95% of IgG-mediated reactions are not fixed.[1] Therefore, after several months of avoidance, problem foods can be reintroduced into the diet in moderate amounts without causing symptoms as long as they are not eaten too frequently.

In this book, the word "allergy" will be used in its original sense. Any immune-system related adverse reaction to a food will be called a food allergy without debate about the immune mechanism involved. Indeed, many adverse reactions can involve more than one mechanism.

Over seventy medical conditions are thought to be associated with food allergies. These conditions can be respiratory (hayfever, asthma, bronchitis, recurring ear infections, sinus conditions, rhinitis, laryngitis, allergic sore throat, hoarseness); digestive (gastroenteritis, irritable bowel syndrome, celiac disease, inflammatory bowel disease, diarrhea, con-

stipation, colic, malabsorption); cerebral (headaches, dizziness, sleep disorders, learning disorders, tension-fatigue syndrome, foggy thinking, irritability, depression); skin-related (dermatitis, eczema, angioedema, hives, rashes); or related to other body systems (arthritis, myalgia, urinary irritation, conjunctivitis, edema, hypoglycemia, diabetes, overweight, underweight, premenstrual syndrome, fatigue).[2] This list is not exhaustive. Virtually any symptom can be associated with food allergy or intolerance. By identifying and eliminating or treating food allergies, many of our seemingly insolvable chronic health problems can be improved or eradicated.

Why Do We Have Food Allergies?

"Why?" is a difficult question. When my food allergies were first diagnosed, I asked the doctor, "Why did I suddenly develop all of these food allergies?" His reply was, "You may have had them for a long time without realizing it." His answer may have been partially correct, because I was always an allergic person from a family of allergic people, but he did not consider what had suddenly caused a change in the level of my allergies. It is only by addressing the "whys" of our food allergies that we can hope to actually solve the problem.

Heredity is often cited as a cause of food allergies, and certainly plays a role since a recessive gene has been identified as being linked to IgE-mediated food allergies.[3] Repeated exposure to the same foods, especially in large quantities, is also implicated.[4] Yet other factors also contribute to the severity and number of allergies most allergy-prone people endure.

The most common cause of multiple food allergies, in my opinion, is having a "leaky gut," or increased intestinal permeability. (This can be debated as a "chicken or egg" story though; which came first, the increased intestinal permeability or the food allergies?) Small openings can occur in the lining of the intestine, which allow large molecules of undigested or incompletely digested food to enter the bloodstream. If the quantity is too great for the liver to "clear" almost immediately, the immune system has a chance to recognize these molecules as being foreign to the body and produces antibodies against them. When the food is eaten again and again passes into the bloodstream undigested or only partially digested, the antibodies bind with the food. These antibody-food complexes can travel through the bloodstream to any part of the body where they then cause problems.

There are many causes of "leaky gut." Immaturity is one of them. Babies are born with higher intestinal permeability than older children or adults. Therefore, ideally infants should consume only breast milk for the first several months of life and other foods should

be introduced cautiously.[5] If breast feeding is impossible, a completely hydrolyzed formula such as Nutramigen™ should be used because it is already "broken down" into simple sugars, free amino acids, and other very small units.[6] Cow's milk is highly allergenic and should not be given to babies.

Toxins of many kinds can also increase intestinal permeability. These include alcohol, nonsteroidal anti-inflammatory drugs (aspirin, ibuprofen, arthritis medications, and many others), cytotoxic drugs used to treat cancer, corticosteroid drugs, and, by their action on bowel flora, antibiotics. Radiation therapy to the abdomen also increases intestinal permeability.[7]

Then too, internal factors in a patient's body can cause or contribute to a leaky gut. These include nutritional deficiencies, inflammatory bowel disease, poor digestion, and food allergies. There is a vicious cycle involved with these internal factors since the leaky gut also causes them or contributes to their severity.[8]

Last, but by no means least, "unfriendly" organisms present in the digestive tract can cause increased intestinal permeability. These infections can involve protozoan parasites, yeasts such as *Candida albicans,* bacteria that are conventionally considered "pathogens," such as *Salmonella,* or an overgrowth of bacteria usually considered nonpathogenic, such as *Klebsiella, Proteus,* or *Pseudomonas.* Many other organisms not mentioned here can also increase intestinal permeability. (See pages 17 to 20 for more information on intestinal infections).

Most of the factors that increase intestinal permeability can be treated or eliminated from the lives of patients with food allergies. (See pages 13 to 21 for details). By doing this, the "why" of our leaky guts can be treated, and therefore our food allergies can be lessened and our health can be greatly improved.

FOOTNOTES

1. Braly, James, M.D. *Dr. Braly's Food Allergy and Nutrition Revolution,* Keats Publishing, Inc., New Canaan, CT, 1992, p. 39.

2. Reno, Liz, M.A. and Joanna Devrais, M.A. *Allergy Free Eating,* Celestial Arts, Berkeley, CA, 1995, pp. 22-23 and Braly, James, M.D. *Dr. Braly's Food Allergy and Nutrition Revolution,* pp. 44-45.

3. Reno, Liz, M.A. et al, *Allergy Free Eating,* p. 26.

4. Ibid, p. 18.

5. Ibid, p. 19.

6. Ibid, p. 27.

7. Galland, Leo, M.D. "Leaky Gut Syndromes: Breaking the Vicious Cycles," *Townsend Letter for Doctors,* August/September 1995, p. 62, and Reno, Liz, et al, pp. 19-20.

8. Galland, Leo, M.D. "Leaky Gut Syndromes," pp 62-63 and Reno, Liz, et al, pp. 19-20.

The Diagnosis And Treatment of Food Allergies

The diagnosis of food allergies can seem complicated because reactions to foods are often delayed and may be affected by many factors, including insufficient rest, stress, and other allergens we are exposed to at the same time. Indeed, it is usually impossible to determine what you are allergic to on your own if you have more than a very few food allergies. Therefore, medical testing and help from the right health professionals is important. There are associations you can consult to find someone who can help you in your area. (See "Sources," page 299).

The treatment of food allergy can, like its diagnosis, seem complex. Food allergy is definitely not a problem that fits the preconceived notions of our "for every ill there is a pill" society. Food allergies are often treated from several directions at the same time, such as eliminating allergens, strengthening the patient nutritionally, and modifying the patient's immune response. It is not something your doctor can do for you by himself or herself. (Indeed, many physicians do not understand allergies other than those mediated by IgE). As a patient with food allergies, YOU must be actively involved in your treatment. The most important parts of your treatment YOU will do, not your doctor. Food allergy is a very individual problem, and you know your body better than anyone else does. It may be difficult to take action because of your health, but if you want to get well, YOU must take responsibility for yourself. YOU must make the necessary changes in your lifestyle. YOU must become a well-informed, active participant in your own health care. Then YOU will be the one to enjoy the benefits of improved health.

Diagnostic Tools

Elimination and challenge was the first type of testing used for food allergies. It is still often used in the clinical ecology units of hospitals or clinics and is considered the "gold standard" method of allergy testing for foods. The patient either fasts for several days (in a clinic under medical supervision) or at home eliminates the foods to be tested from the diet for five to ten days. The suspected foods are then eaten one at a time and symptoms are recorded. This method is difficult to use for delayed (non-IgE) food allergies. In severely allergic patients, it can be dangerous and should be used only under medical supervision, such as in a clinic setting.[1]

Intradermal or scratch skin tests are used by many conventional allergists and are good for inhalant allergies. However, they are usually not reliable for food allergies because they detect only IgE-mediated food allergies, which make up only about five percent of all food reactions.[2]

Provocation-neutralization testing is the most common in-office, or in-vivo test for food allergies. A small amount of a dilute extract of the food to be tested is injected into the skin of the patient's arm or given under the tongue. Any symptoms that result are recorded and the skin reaction is monitored. Then injections or sublingual drops of weaker or stronger dilutions of the same food extract are given. The dilution which does not provoke a skin reaction and clears up the patient's symptoms is the "neutralizing dose" and is used for neutralization treatment. (See page 10 for more information about neutralization). This test works best with food reactions that happen quickly whether mediated by IgE or IgG[3] It is about 80% accurate.[4]

Only in vivo tests (such as elimination-and-challenge or provocation-neutralization) are considered definitive for food allergies because they have been tested in double-blind studies. However, although our allergist uses the provocation-neutralization method for all food allergy testing for adults, when my son needed allergy testing at age 4, the doctor used a blood test to spare such a young child the trauma of multiple needle sticks. We were instructed to re-test all the foods that showed up as possible problems for my son by doing elimination and challenge tests at home. In this time of economic struggle and medical insurance which covers less and less every year (if you are fortunate enough to have it), some patients chose to pay out-of-pocket for blood tests for food allergies rather than bear the cost in both time and money of allergy testing in a doctor's office. There are several types of blood tests including RAST (Radio-Allergo-Sorbent Test), ELISA (Enzyme Linked Immuno-Sorbent Assay), and ELISA/ACT (Enzyme Linked Immuno-Sorbent Assay/Activated Cell Test). RAST and ELISA tests can detect either IgE or IgG antibodies to foods in the blood sample.[5] ELISA/ACT tests can detect IgG, IgA, and IgM antibodies, immune complexes, and cell activated reactions.[6] Thus, blood tests can detect the factors implicated in delayed as well as immediate food allergies, but to be definitive, food allergies that show up on a blood test should be confirmed by elimination and challenge.[7] If you elect to have a blood test, consult your doctor about the advisability and safety of confirming food allergies that show up as positive by an elimination and challenge test. Laboratories that perform blood tests are listed in "Sources," page 300. These laboratories may also be able to direct you to a nearby allergy clinic.

Treatments

Special diets are the most commonly used treatment for food allergies. If the patient is allergic to only one or two foods, eliminating the offending foods may be the only treatment necessary. This is the course usually taken in the case of children with peanut anaphylaxis. My father was able to treat the milk allergy he got from drinking large quantities of milk for an ulcer by simply eliminating dairy products.

When a patient has multiple food allergies, the offending foods must be eliminated and all other foods should be eaten at intervals of four to five days or longer. This is know as a "rotation" or "rotary diversified" diet. Rotation diets are necessary for patients with multiple allergies because if you have overt allergies to many foods, it is likely that you have slight, subclinical allergies to many other foods that you consider safe. Eating them on a rotated basis reduces your exposure to them and hopefully will help preserve your tolerance for them.

Doctors prescribe rotation diets of varying degrees of strictness depending on the severity of your allergies. On the most strict diets each food is eaten only once on its rotation day and the length of the rotation cycle may be much longer than four to five days. One very allergic person I talked to had been put on a one food per meal, three meals per day, twelve day cycle diet by a prominent allergy clinic.

Some doctors consider rotation diets with very long cycles to be counterproductive.[8] For most patients, a four to five day interval between eating foods gives the best masking of symptoms. A longer cycle may lead to "unmasking;" the patient reacts to and "loses" yet another food. However, there are patients who find that some foods agree with them better if they are rotated at longer intervals. I personally have many foods that I can tolerate if I eat them at one week or two week intervals, but which will bother me if I eat them every fourth to fifth day. The ideal rotation interval can vary from patient to patient and from food to food, but should never be less than four days because it takes at least that long for foods and immune factors to clear.

On most patients' rotation diets each food may be eaten more than once on the rotation day and the cycle is usually four to five days long. The rotation day can be any twenty-four hour period, not necessarily a calendar day. This means that leftovers from dinner can be eaten for tomorrow's lunch. No food should be eaten in extremely large quantities. (For example, rice should not make up half of the food you eat on its rotation day). As long as many foods are included in the diet, this is an easy rule to follow. However, if patients become allergic to almost all foods and find themselves left with only two or three foods per rotation day, they will of necessity be eating those foods in large quantities. In this situation they will probably eventually become sensitive to the few foods they are eating. Efforts must be made to seek out new and unusual foods so the number of foods they are eating can be increased. For sources of unusual starches and game meats, see "Sources," pages 298 and 299.

On a rotation diet, foods are rotated according to their biological classification in food families because foods in the same family have similar antigens. Usually the entire family is kept on the same rotation day. However, some doctors allow their less severely allergic patients to eat a different member of certain families on each day of the cycle. The families most often treated this way are the grain family and the cattle family. The rotation

diet in this book, found on pages 39 to 45, treats the grain and cattle families this way. If your doctor advises against, for example, eating a different grain every day, simply eliminate grains from three days (or two days, if he allows you to "split" the grain family, as in the next paragraph) and instead eat the listed non-grain alternative on those days.

On a rotation diet, food families that are not a major problem for you can be "split." This means that you eat some of the foods in the family on, for example, day 1 of a four day cycle, and others of them on day 3. I like to split the vegetable families that contain dark green leafy vegetables so I can eat some of these extremely nutritious foods every day. Using the rotation diet in this book, you could eat goosefoot family vegetables on days 1 and 3 (chard on day 1 and spinach on day 3, for example) and cabbage family vegetables on days 2 and 4 (collards on day 2 and arugula on day 4, for example). For more information on how to use the rotation diet in this book, see pages 34 to 38.

When you first start on rotation, you may find it easiest to follow a set rotation diet such as the one in this book. However, after a while you may tire of eating the same combinations of foods every fourth day. For variety you may wish to rotate different categories of foods on different lengths of cycles. For example, rotate your grains or non-grain alternatives, oils (and other foods in the same family), and fruit sweeteners used in baking (and therefore also the fruits they come from) on a four day cycle, so leftover baked goods from Monday can be frozen and eaten on Friday. Rotate meats or other protein foods and vegetables on longer cycles. Decide each day what vegetables and proteins you want to eat and record them so you can be sure you have not eaten the same or related foods for at least four days. Rotating foods at longer intervals this way may also improve your tolerance for them, although this is not the case for all patients.

Since most food allergies are not "fixed," after you have avoided your problem foods for several months, your doctor may advise you to try to reintroduce them into your diet. When you are ready to liberalize your diet, you should eat your problem foods in moderate amounts and on a strictly rotated basis. You may find that you can eat some of them every fourth day with no problems, but that others must be rotated at longer intervals in order for you to tolerate them. For example, after six months of avoidance, my son, Joel, was able to add most of his problem foods back into his diet at five day intervals, but he could eat corn only once or twice a month. If he ate it weekly, his eczema would flare up. Several years ago when I was able to eat grains occasionally, I could eat one serving about once a month during the winter months without having problems. If I ate them more often or during pollen season, I could not tolerate them.

Medications and supplements may be used to help deal with food allergy symptoms. Gastrocrom™ is a prescription medication that can give people with food allergies some relief. It is sodium cromolyn, a drug which is taken by inhalation for hayfever and asthma and orally for food allergies. It must be used before exposure to an allergen, and works by preventing the release of histamine and other chemicals which initiate and medi-

ate the allergic response. Because Gastrocrom™ suppresses symptoms without having any effect at all on the causes of food allergies, I have heard of patients getting progressively worse while taking it, although they may initially feel better. Other allergy medications such as antihistamines may also help suppress your symptoms.

Digestive enzymes help you break down your food into smaller less allergenic molecules, thus decreasing your reaction to the foods you eat. They can be quite useful for short term use as part of the recovery process. Because digestive enzymes are large complex protein molecules, you may not want to use them for long periods of time without rotating the sources they come from or you could become allergic to the enzyme preparations themselves. For more information on digestive enzymes and how to rotate them, see pages 15 to 16.

Vitamin C is a general anti-allergy supplement. We experience allergic symptoms when an allergen-antibody complex causes mast cells to release histamine and other allergy-mediating chemicals. Vitamin C helps stabilize mast cells so they are less likely to release these substances.

Large doses of quercitin, such as 4 to 6 grams per day, may also be helpful to some allergy patients.

Pantothenic acid is sometimes used for general allergy relief. It supports the function of the adrenal glands which make hormones that help us cope with allergic reactions.

Bicarbonate preparations such as Alka Seltzer Gold™, Vital Life Bi-Carb Formula™, or Tri-Salts are useful as a "quick fix" for food reactions. The pH of the body becomes more acid during an allergic reaction, and these supplements help alkalinize the blood, thus making you feel better. However, they should not be over-used because they neutralize stomach acid, which is essential to good digestion and to the support of healthy intestinal flora. (See pages 16 to 17 for more about hydrochloric acid). Bicarbonate preparations are best used twenty minutes to an hour following the meal to which you react so they do not interfere with the digestion of your next meal. The bicarbonate preparations, as all supplements you use, should be hypoallergenic themselves. Alka Seltzer Gold™ contains corn and thus is not appropriate for corn-sensitive patients. See "Sources," page 300, to locate brands that you can tolerate.

Immunotherapy may also be used to treat food allergies by modifying the immune response to allergenic foods. While standard conventional allergy shots are not effective for food allergies, two types of immunotherapy were developed in the 1960's that are useful. In this country, neutralization is the most widely used type of immunotherapy for food allergies. The patient is tested using the provocation-neutralization method described on page 7, and the dilutions of food extracts which "neutralize" the patient's reactions are determined. These dilutions are called "neutralizing doses." The doctor's office then prepares a solution containing neutralizing doses of extracts for all the foods to which the patient is allergic. The patient takes this neutralizing solution either under the tongue or by self-injection. When an allergenic food is eaten, the neutralizing solution should turn off the

patient's reaction to the food. Because neutralizing doses change, patients must be retested frequently to keep their neutralizing drops current and working effectively.

The second kind of immunotherapy for food allergies is low dose immunotherapy. The first treatment of this type was enzyme potentiated desensitization (EPD) which was developed in England over 40 years ago and has been used around the world. It was used in the United States for about 10 years as part of a study conducted under an Investigational Review Board. An EPD shot contains a very minute amount of many allergens plus an enzyme which naturally occurs in the human body, beta-glucuronidase.

An American-made form of low dose immunotherapy called LDA (for Low Dose Allergens) was developed in 2003. Both EPD and LDA are used to treat inhalant allergies, adverse reactions to chemicals, and food allergies all at the same time. They stimulate the body to make T-suppressor lymphocytes specific for allergen suppression. These lymphocytes retrain the body not to react to allergenic substances.[9] Because the shot's effectiveness is dependent on having the correct, very low dose exposure to allergens at the time the shot is given, patients must avoid exposure to high amounts of allergens around the time of their shots. For severely allergic persons, it may take two years of treatment to achieve good results with food allergens, but after that, most patients' diets are unrestricted except for around the time of their shots. About 70-80% of LDA patient have a good response to treatment for food allergies. The success rate for inhalant allergies is 80-85% (90% if the patient has no food allergies) and the response is usually rapid, within one to a few shots.[10] Retesting is never required for low dose immunotherapy.[11]

LDA contains uniquely American allergens such as cottonwood, mountain juniper, New World evergreens, sage, avocadoes and other foods not commonly eaten in the UK and which are not in EPD, perfumes, etc. This broader antigenic coverage makes LDA a more complete treatment for Americans.[12] Part of the reason low dose immunotherapy is more effective than conventional allergy shots or neutralization may be because it treats all of the patient's allergies at the same time, including those not tested for and those which may be latent or causing subclinical reactions.[13] Thus, having a unique form of low dose immunotherapy for Americans makes sense on many levels.

Most American patients who have taken both EPD and LDA find them to be equally effective. In my own personal experience, I have done better on LDA than I did previously on EPD, but whether this is due to being better covered by the Americanized antigen mixture or just my improving health is impossible to determine. However, conversations with other patients also lead me to believe that more complete coverage for one's allergies is important. I have talked to many patients who say things like, "My doctor didn't think I had major problems with inhalants. When my food allergies didn't respond to treatment as expected, he reconsidered and added the inhalant concentrate to my shots. Then suddenly I could eat everything."

Before low dose immunotherapy treatment is begun, factors which could interfere, such as dysbiosis, hormonal imbalances, heavy metal toxicity, and poor nutritional status, should be corrected as well as possible. Dr. Leo Galland estimated that in his practice of patients with digestive problems, after he treated their dysbiosis, nutritional and other problems, and promoted intestinal healing, only 25% of those who came to him for low dose immunotherapy treatment for their food allergies still needed it.[14] If low dose immunotherapy has seemed to fail, interfering factors should be tested for and treated.

To learn more about low dose immunotherapy and for recipes and organizational tips which will help you with this treatment, see *The Low Dose Immunotherapy Handbook* as described on the last page of this book. To find a doctor who can treat you with LDA, visit this website: www.drshrader.com.

By using these options for the diagnosis and treatment of food allergies, and especially by getting to the root of the problem as discussed in the next chapter, those of us with food allergies can progress towards optimal health.

FOOTNOTES

1. Reno, Liz, M.A. and Joanna Devrais, M.A. *Allergy Free Eating,* Celestial Arts, Berkeley, CA, 1995, p.28.

2. Ibid, pp. 29-30.

3. Ibid, pp. 29-30.

4. Personal communication from W. A. Shrader, Jr., M.D., April, 1997.

5. Reno, Liz, M.A. et al, pp. 30-31.

6. Interview with Russell Jaffe, M.D., Ph.D., "Allergy Testing," *Mastering Food Allergies Newsletter,* #44, April 1990, p. 3.

7. Personal communication from W. A. Shrader, Jr., M.D., April, 1997.

8. Personal communication from W. A. Shrader, Jr., M.D., April, 1997.

9. Interview with W. A. Shrader, Jr. M.D. "Enzyme Potentiated Desensitization (EPD): Exciting New Hope for Food Allergies," *Mastering Food Allergies Newsletter,* #74, July/August 1993, pp. 1-2.

10. Personal communication from W. A. Shrader, Jr., M.D., January, 2006.

11. Interview with W. A. Shrader, Jr. M.D. "Enzyme Potentiated Desensitization (EPD): Exciting New Hope for Food Allergies," *Mastering Food Allergies Newsletter,* #74, July/August 1993, pp. 1-2.

12. Personal communication from W. A. Shrader, Jr., M.D., June, 2003.

13. Interview with Len McEwen, M.D. and W. A. Shrader, Jr. M.D. "EPD Update," *Mastering Food Allergies Newsletter,* #88, November/December 1995, p. 3.

14. Ibid, p. 1.

Getting to the Root of the Problem

The most effective treatments for any health problem are those that address the root cause of the condition rather than just treat the symptoms. By correcting the factors that contribute to food allergies and leaky gut, you can enhance the effectiveness of the treatments described in the last chapter and overcome your allergies.

Nutrition and Diet

Our bodies depend on the nutrients from our food for energy, repair, and all the functions of life. (That is why many nutrients are called "essential.") Even with a good diet, those of us with food allergies are often malnourished because our nutritional status does not depend only on what we eat, but also on what we digest and absorb. Therefore, attention to diet and nutrition is crucial to repairing our leaky guts and recovering our health.

Because we may not absorb nutrients from foods to which we are allergic, and because these foods contribute to the irritation of our intestine and further decrease absorption, the first thing to consider in planning your diet is that you do not eat foods to which you are allergic. If you have reached the point of having some degree of allergy to most common foods, seek out new foods which you have never tried before. Read the food family tables on pages 269 to 280 to get ideas. Sources for unusual starches, flours, and game meats are listed on pages 298 and 299. Large health food stores often carry unusual vegetables and fruits in their produce departments. You might also shop for produce at an international market or in the "exotics" section of the produce department in a large supermarket. As your health improves, or if your diet still contains only a few foods after you have added all the new ones possible, add back some of your least problematic foods on a carefully rotated basis, possibly using a longer cycle than four to five days. The extremely restricted diets often required by the severely allergic may add to the problem of malnourishment. A highly varied diet is the most healthy kind of diet for everyone to eat.

Dr. Leo Galland, who is one of the foremost authorities on food allergies and gastrointestinal health, recommends an oligoallergenic (low in allergens) nutrient dense diet for "gut repair."[1] This means that your diet should not contain foods to which you are allergic nor the chemically adulterated, nutrient stripped, highly processed foods that are a major part of the "standard American diet."

Vegetables and fruits should make up a large part of your diet because of the vitamins, minerals, phytochemicals, and fiber they contain. Dark green leafy vegetables are nutritional powerhouses in every way, and even contain good quantities of essential fatty acids.[2] (To "legally" eat them on every day of rotation, see page 9).

High quality, non-allergenic protein is essential for the tissue repair involved in healing your intestine. Vegetarian diets are popular among those with health problems and, properly used, can supply this protein. (Dr. Paul Eck suggests that the prevalence of impaired secretion of stomach acid and the associated difficulty in digesting flesh proteins is the reason for the popularity of these diets.[3] See pages 16 to 17 for more about this problem). However, if you are allergic to the beans and grains that are the best protein sources on vegetarian diets and must omit them or not eat them frequently, you will often be better off eating unusual fish or game meat and taking a hydrochloric acid supplement to help your digestion.

You also should pay attention to the types of fats you eat. While the fat in commercially raised beef is unhealthy, game meat is a good source of essential fatty acids.[4] Essential fatty acids are important to intestinal integrity and are especially high in fatty fish, such as salmon and mackerel, and cold pressed oils, such as flaxseed oil. As with all foods, if you take flax oil every day, you may become allergic to it. Rotating a variety of oils is safer. For more information on the fatty acid profiles of oils and fatty acid nutrition, call Omega Nutrition at (800) 661-3529 and ask for their pamphlet, "Fats: Facts and Fiction."

Supplementation is an excellent way to improve your nutritional status. The supplements you take should be hypoallergenic because, as with foods, you may not absorb nutrients well from preparations which come from or contain fillers made from foods to which you are allergic.[5] (For sources of hypoallergenic supplements, see page 300). The need for certain nutrients can vary as much as 30-fold from person to person.[6] Food allergy patients can be profoundly deficient in some nutrients, so restoring the balance is essential to recovery. However, taking large quantities of single nutrients can cause deficiencies of other nutrients. Nutrient imbalances, like food allergies, can be complicated to determine without, or sometimes even with, professional help. If your doctor is not experienced in this area, you may benefit from consulting a nutritionist who, from your history, symptoms, and laboratory tests, can help determine your individual needs. (See "Sources," page 299, for help in finding a qualified nutritionist near you).

What we eat also affects our health through the presence of undesirable organisms in our food. All animal foods should be thoroughly cooked before you eat them. Thorough cooking is also the only way to be completely certain that plant foods contain no infectious agents. Plant foods that will be eaten raw should be treated with a disinfectant before you eat them. In *Guess What Came to Dinner,* Ann Louise Gittleman gives detailed instructions on how to disinfect food using Clorox™ and how to prevent getting a parasitic infestation from your food, water, travel, or pets. (See "References," page 296). If you are not able to use Clorox™ due to chemical sensitivities, Nutribiotic™, a grapefruit seed extract, can be used instead. In laboratory testing, it has been shown to be active against a wide range of bacteria, yeasts, fungi, and parasites.[7] At our house, any produce that we will be eating raw

is soaked in a sink of cool water with about 30 drops of Nutribiotic™ added for at least 30 minutes as soon as we bring it home from the store.

Finally, consider the effect that your attitude toward food has on your nutritional status. So often when we think of food, those of us with food allergies think of what we cannot eat, and our whole focus is on the elimination of foods. A friend told me that, after consulting a naturopath, her whole attitude toward food changed. She changed her perspective from the avoidance of foods to an emphasis on putting good and healthy foods into her body. Seek out the most nutritious foods you can tolerate and eat them with enjoyment.

Digestion

Many people with food allergies have impaired digestion. Incomplete digestion of foods which then pass through a leaky gut into the bloodstream is a major contributing factor to the problem of food allergies.[8]

There are several things you can do to improve your digestion. The most basic is to pay attention to how you eat. Try to be in a relaxed frame of mind when you eat. Chew your food very thoroughly. Chewing breaks the food down into smaller particles that can be acted on more easily by your digestive system, starting in the mouth. When you chew well, you begin the process of starch digestion by mixing the food with the enzyme salivary amylase.

Drinking water with meals is a controversial subject. Some have suggested that it "dilutes the digestive juices." Using large quantities of water to wash down food rather than taking the time to chew thoroughly is a practice to be avoided. However, studies have shown that a moderate intake of one to two glasses of water with a meal improves digestion by facilitating both the production of gastric secretions at the time you eat and also the secretion of bicarbonate into the small intestine that normally occurs one to two hours after a meal.[9]

The presence of undigested food in the stool indicates a deficiency in the secretion of hydrocholoric acid by the stomach, of digestive enzymes by the pancreas, or both. These deficiencies can be helped by supplementation. Digestive enzymes are available as supplements in several forms. Pancreatin is an extract of the pancreas of cows or pigs and is a very potent, broad-spectrum aid for the digestion of proteins, fats, and carbohydrates. However, if you are allergic to beef or pork, you will probably not tolerate pancreatin.

Broad-spectrum plant enzymes are derived from the fungus *Aspergillus orazeae*. They are also active in the digestion of fats, proteins, and carbohydrates. I took plant-based enzymes for several months, and during that time gained weight easily for the first time

since I developed Crohn's disease. (Note: Although being underweight is a problem for some with food allergies, improving digestion, and especially removing addictive allergic foods from the diet, allows overweight patients to lose weight easily. The treatment of maldigestion and food allergies should lead to normal weight). However, after using digestive enzymes daily for several months, I became sensitized to them. Digestive enzymes are large, complex protein molecules, and thus we may sensitize to them more easily than to other supplements.[10]

Dr. William Philpott recommends the rotation of digestive enzymes on a four-day cycle.[11] This can be accomplished by using pancreatin (from pork and beef), plant enzymes (from *Aspergillus orazeae*), bromelain (from pineapple), and papain (from papaya). Bromelain and papain are active in the digestion of protein only. I personally found that I did not gain weight using papain and bromelain. Studies have shown them to be much less potent than pancreatin.[12]

In his book, *Digestive Enzymes,* Dr. Jeffrey Bland says that while enzyme supplements can be an important part of breaking the vicious cycle of maldigestion and starting us on the road back to health, we should not have to take them forever. He recommends a regimen of vitamin C, vitamin A, zinc, and pantothenic acid to improve digestive health in general.[13] You might want to discuss this protocol with your doctor or nutritionist and consider trying it. After about a month on these supplements, I again found it easier to gain weight, and because of that, I assume than I am now producing my own digestive enzymes.

It is estimated that 80% of patients with food allergies suffer from some degree of impairment of hydrochloric acid secretion by their stomachs.[14] This can range from the complete absence of hydrochloric acid (achlorhydria) to a deficiency in the amount of hydrochloric acid secreted (hypochlorhydria). The passage of acidic stomach contents into the small intestine is the stimulus for the pancreas to release digestive enzymes and bicarbonate. Therefore, if you have hypochlorhydria or achlorhydria, you may not secrete digestive enzymes properly even if your pancreas is fully able to do so. This is one of several reasons that hydrocholoric acid supplements may be essential to your return to health.

However, hydrocholoric acid supplements, if not needed or if taken in too large amounts, can cause ulceration of the stomach. Supplementation with betaine-HCl (from beets) or glutamic-HCl (from grains) should be done only under medical supervision. Your doctor may perform a Heidelberg gastrogram, which is a test that determines your ability to secrete hydrocholoric acid. To do this test, the patient swallows an instrument the size of a large capsule which has a string attached to it for retrieval. The instrument then transmits information about the pH of the digestive tract and how it changes when the patient drinks a bicarbonate solution. Or your doctor might suspect hypochlorhydria because of the presence of undigested food in a stool analysis. Rather than doing a Heidelberg gastrogram, he

or she may have you take gradually increasing amounts of a hydrocholoric acid supplement and report your symptoms to determine your degree of need for hydrochloric acid.

Surprisingly, a common symptom of hypochlorhydria is heartburn. Television commercials tell us when we have heartburn we should neutralize our stomach acid with various antacids, or, even more drastically, take medications which have recently become available "over the counter," such as ranitidine, cimetidine, nizatidine, or famotidine, which reduce our production of stomach acid. For those who have heartburn because of hypochlorhydria, these medications may bring relief of heartburn but could lead to poor digestion and thus to dysbiosis, leaky gut, and food allergies. Before you risk compromising your health with these medications, ask your doctor to help you find out if your real problem might be inefficient production of hydrochloric acid.

In addition to stimulating the release of digestive enzymes, hydrocholoric acid plays other roles in your health. It is essential for the ionization of minerals so they can be absorbed. It is interesting to note that some cases of iron deficiency anemia and other mineral deficiencies can be traced to low hydrocholoric acid production. Protein cannot be digested without sufficient hydrocholoric acid. This acid is responsible for nearly sterilizing food in the stomach, so insufficient secretion can result in bacterial overgrowth of the small intestine, as discussed in the section on dysbiosis, pages 17 to 20. Finally, hydrocholoric acid promotes a friendly pH for the growth of *Lactobacillus* and *Bifidobacterium* in the small and large intestine.[15]

A final possible way to improve your digestion, in addition to chewing thoroughly, relaxing at mealtimes, and taking any necessary hydrocholoric acid or digestive enzyme supplements, is the system of "food combining." I practiced food combining faithfully for several months and did not notice a change, but there are many testimonials about its effectiveness, so it must help some people. *The Body Ecology Diet* by Donna Gates is based in part on the principals of food combining. In my opinion, if other ways of improving your digestion seem ineffective, the body ecology diet and food combining are worth a try as long as they do not severely restrict your nutrition.

Dysbiosis

A healthy person lives in harmony with his or her intestinal flora. The person provides a home and food to over 400 species of bacteria.[17] The bacteria, which in a healthy person will be predominantly "friendly" types, do a myriad of health-promoting things for the person, as will be discussed in the next chapter. This state is called "symbiosis."

Sometimes this state of happy balance does not exist because of the presence of frankly pathogenic organisms, the overgrowth of unfriendly organisms that are often not

considered pathogenic, or the absence of friendly bacteria. Then, dys-symbiosis, or dysbiosis exists. Dysbiosis can be caused by protozoan parasites *(Entamoeba histolytica, Entamoeba coli,* other *Entamoeba, Dientamoeba fragilis, Endolimax nana, Giardia lamblia, Blastocystis hominis, Chilomastix mesnili,* and others); yeast *(Candida albicans,* other *Candida* species, *Torulopsis glabrata,* and others); or bacteria *(Salmonella, Shigella, Campylobacter jejuni, Yersinia enterocolitica, Klebsiella pneumoniae, Citrobacter freundii, Citrobacter diversus, Proteus mirabilis, Pseudomonas aeruginosa,* some strains of *Escherichia coli, Staphylococcus aureus,* some strains of *Bacteriodes, Clostridium difficile,* and others). Some of these organisms are not considered "pathogenic" by conventional medicine. However, weak pathogens, or a predominance of "unfriendly" organisms can cause severe illness in a chronically ill, weakened, or malnourished patient.[18] The eradication of these organisms can make a dramatic difference in the patient's health.

A very common cause of bacterial or fungal dysbiosis is often the repeated or long term use of antibiotics. Antibiotics kill both the bacteria you want them to kill and the "friendly" bacteria in the intestine and the vagina. This leaves these areas open to be colonized by yeast, unfriendly bacteria, and parasites.

Parasitic infestations are on the increase because of changes in our lifestyles that have occurred over the last few decades. International travel is now commonplace. If you are not a traveler, the world and its parasites will come to you, brought by imported produce and immigrants from countries where sanitation is sub-standard. Eating out in restaurants frequently and the close contact of day care centers contribute to the spread of parasites.

Maldigestion can also promote dysbiosis. Dr. Martin Lee says, "Colonic flora is a reflection of what it is fed."[19] If food is completely and rapidly digested and absorbed in the small intestine, it is not available to nourish unfriendly bacteria or yeast in either the small or large intestine. Almost all that is left to reach the large intestine is fiber, which is a favorite food for friendly bacteria such as *Lactobacillus* and *Bifidobacterium* and promotes their growth.

Diet can also contribute to dysbiosis. A diet high in flesh protein and low in plant foods promotes the growth of *Bacteroides* species, but a lacto-vegetarian diet, based on milk products and plant foods, promotes the growth of *Lactobacillus* and *Bifidobacterium.*[20] Elaine Gottshalls's book *Breaking the Vicious Cycle* prescribes the "specific carbohydrate diet" for patients with inflammatory bowel disease.[21] This diet eliminates all grains, sugar, lactose, other disaccharides, and some starches that such patients may be unable to digest and absorb. This leads to a shift in bowel flora towards normal and improvement in symptoms.

The ideal diet for patients with candidiasis is the subject of considerable debate. Several years ago, high-protein, low-carbohydrate diets, on which the grams of carbohy-

drate may have even been counted, were used. Then Dr. William Crook began using diets higher in complex carbohydrates for his patients. Simple carbohydrates, such as fruits, were still restricted initially.[22] When Dr. Crook was in Colorado in 1995, I heard him speak to a group of health professionals, and the question of the best diet for candidiasis was raised. Dr. Crook said that, in his many years of experience, the only absolute he had determined to be essential for the diet was that sugar had to be avoided. He said that all the Nystatin™ or Diflucan™ in the world will not eradicate *Candida* if a patient continues to eat sugar. Recent German studies suggest that very low carbohydrate diets may be counterproductive because they cause the *Candida* to become invasive and penetrate deeper into the tissues in search of food.[23]

Dysbiosis caused by bacteria or yeast can be diagnosed using a stool test called a comprehensive digestive stool analysis (CDSA). The microbiology part of this test differs from a standard "stool culture," which usually only reports the presence or absence of aerobic (oxygen-loving) bacteria considered "pathothenic" by conventional medicine, such as *Salmonella* and *Shigella.* A CDSA tests for the presence and amount or absence of all aerobic organisms and, although they are not strictly aerobic, friendly organisms such as *Lactobacillus* and *Bifidobacterium.* The organisms a CDSA reports include yeast of all kinds, all normal and abnormal aerobic bacteria, *Bacteroides Lactobacillus,* and *Bifidobacterium.* A CDSA also gives your doctor chemical information that reflects the health of your digestive system. This information includes the presence and amount or absence of undigested protein and plant fibers, fats, fatty acids, occult blood, and other metabolic markers. This information may be suggestive of conditions that are affecting your health in general. Tests for dysbiosis, such as a CDSA or a parasitology test, as discussed below, may be the most important tests you do and should not be omitted for any patient with severe food allergies or digestive problems. Great Smokies Diagnostic Laboratory can refer you to doctors in your area who use the CDSA to evaluate their patients. (See "Sources," page 300). To learn more about the CDSA, visit this page of the Great Smokies Laboratories website: http://gsdl.com/home/assessments/cdsa/appguide/.

In-depth parasitology testing should also be done to determine if parasites are causing dysbiosis. Such in-depth testing can be done best by a specialized parasitology lab such as the Parasitology Center. (See "Sources," page 300). The parasitology testing you should have done differs from the standard "ova and parasites" test done at most hospital laboratories in several ways. This testing will report organisms that would not be reported on a standard test because they are not considered "pathogenic" by many in conventional medicine, such as *Blastocystis homonis.* Also, since specialized laboratories have more experience in looking for parasites, they are more likely to find any that are there. However, even when the test is done by an experienced laboratory, Dr. Leo Galland says that parasitology testing should be "taken with a grain of salt."[24] Stool samples, by their very nature, contain a

lot of debris mixed with a very few parasites, eggs, or cysts. It is not always easy to distinguish a degrading white blood cell or other material from something significant. For this reason the test may be reported as negative when the patient DOES have parasites, even if it is done by a competent technician at an excellent laboratory. The more samples submitted, the more likely a parasite will be picked up. The use of purged stool specimens or rectal swabs also increases the chance of recovering parasites because they are dislodged from the intestinal wall. A patient may have several negative tests and still have parasites.

Intestinal dysbiosis can be treated with a variety of prescription and botanical medicines to rid your body of unfriendly organisms. Your CDSA results include sensitivity testing which indicates which medicines are effective against your particular unfriendly bacteria and yeast. Treatment of dysbiosis caused by bacteria and/or yeast will also usually include supplementation with friendly probiotic organisms such as *Lactobacillus* and *Bifidobacterium.* Dr. Leo Galland does not recommend taking probiotics while under treatment for parasitic infestations because bacteria are "food" for protozoal parasites: save your probiotics to take after the course of anti-parasitic treatment is completed.[25] Your doctor may also direct you to take nutrients that help your intestine heal, such as L-glutamine (the major source of nourishment for the cells lining the small intestine), N-acetyl-glucosamine (which stimulates the production of intestinal secretory IgA, a protective factor), and butyric acid (which promotes healing in the large intestine), or other nutrients.

A few supplements you may be taking can be counterproductive to the treatment of dysbiosis and are mentioned here so you can avoid them. Iron supplements feed unfriendly bacteria and protozoan parasites.[26] Fructooligosaccharides (FOS) also feed some unfriendly bacteria, especially *Klebsiella pneumoniae,* hemolytic *E. coli, Bacteroides species,* and *Staphylococcus aureus.*[27] As mentioned above, protozoal parasites "eat" bacteria, so your doctor may advise you to avoid probiotics during the course of anti-parasitic treatment. Cysteine, glycine, and glutathione, while important antioxidants, can stimulate the growth of yeast in some patients with candidiasis.[28] If you are taking botanical remedies for dysbiosis, your doctor may tell you to temporarily avoid all antioxidants because botanical medicines kill parasites and bacteria by oxidizing them, and thus, antioxidants reduce the effectiveness of these remedies.[29]

Other Factors That May Be Harming Your Intestine

Some substances cause increased intestinal permeability and can compound the problem of "leaky gut" and contribute to food allergies. They include alcoholic beverages, nonsteroidal anti-inflammatory drugs (aspirin, ibuprofen, ketoprofen, naproxen, prescrip-

tion arthritis medications, etc.), chemotherapeutic drugs for cancer, radiation therapy to the abdomen, and corticosteroid drugs. There may be times, such as if you have cancer, when you have to take some of these treatments. But "just say no" to using the ones that you have a choice about, such as alcohol and nonsteroidal anti-inflammatory drugs for pain relief.[30]

Nonsteroidal anti-inflammatory drugs are now being sold without a prescription and without much warning about their side effects. I consider this very unfortunate, as is the sometimes seemingly indiscriminate prescribing of these drugs. For anyone with even the possibility of compromised intestinal health, a single dose of a nonsteroidal anti-inflammatory drug can increase intestinal permeability tremendously.[31] Food allergy patients and first degree relatives of people with Crohn's disease, such as my children, fall into the "possibly compromised" category.[32] (I half-jokingly tell my children that if they ever have an injury or other circumstance that requires a painkiller, they should ask for morphine!) If you need pain relief medication, try using heat, herbal pain relief remedies, supplements such as DL-phenylalanine, or acupuncture rather than resorting to nonsteroidal anti-inflammatory drugs.

In a study of factors that might cause inflammatory bowel disease in mice, indomethacin, a prescription nonsteroidal anti-inflammatory drug, induced symptoms of Crohn's disease in normal mice, but not in germ-free mice. The study concluded that some interaction between the indomethacin and intestinal flora produced inflammation.[33] Perhaps the indomethacin caused "leaky gut," which then allowed the mice to become sensitive to their intestinal flora. The *Physician's Desk Reference* warns about the possibility of gastrointestinal bleeding, ulceration, and perforation when using nonsteroidal inflammatory drugs, and reports that one arthritis drug can lead to the development of inflammatory bowel disease.[34] Dr. W. A. Shrader, Jr. says that all nonsteroidal anti-inflammatory drugs cause some degree of mucosal atrophy in the intestine.[35] In my opinion, it is wise to avoid nonsteroidal anti-inflammatory drugs to prevent such problems.

If people with food allergies avoid harmful substances and address the factors at the root of their problems, such as nutrition, digestion, and dysbiosis, their allergies CAN be overcome. It may take time and some of the medical treatments discussed in the last chapter may also be needed, but good health can be possible.

FOOTNOTES

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About the Rotation Diet

If you have multiple food allergies, one of the best ways to help yourself is to "rotate" your foods, or eat a rotation diet. A rotation diet is a system of controlling food allergies by eating biologically related foods on the same day and then waiting at least four days before eating them again. Such a diet can help those with food allergies in several ways.

Rotation diets may help prevent the development of allergies to new foods. Any food, if eaten repetitively, can cause food allergies in allergy-prone individuals or people with "leaky guts." When my food allergies were first diagnosed, I was not told to rotate my foods. I simply eliminated the foods to which I was allergic. Four years later I had developed allergies to the foods I had used to replace the original problem foods in my diet.

A rotation diet helps you pick out allergies to foods for which you were not tested and may not have suspected were problems. If you eat a food on Monday, for example, by Friday, when you eat it again, the "masking" antibodies your body makes specifically for that food will be diminished. Therefore, you will realize you are reacting to it, even though you did not have obvious symptoms when you ate it on a daily basis.

A rotation diet allows you to eat foods to which you have a mild or borderline allergy and which you might not tolerate if you ate them often. Sometimes your reaction to borderline foods may depend on your stress level, other illness or infection, lack of adequate rest, or the season of the year. (For example, grain allergies tend to be more pronounced when the grass is pollinating).

On a rotation diet each food is eaten only every fourth to fifth day or at even longer intervals. Depending on the severity of your allergies, your doctor may suggest that you eat a food only once during the rotation day. Or, if your allergies are not too severe, you may tolerate eating each food more than once during a 24-hour rotation day. Usually all of the members of a food family are eaten on the same day. However, some doctors allow their patients to "split" food families for a more nutritious or more palatable diet. In this case, you eat different members of the same family on more than one day of the rotation cycle with a day off from that family between. (For example, you might eat apples on day 1 and pears on day 3). Some doctors permit their patients to eat a different member of the grain or cattle family on each day of their rotation cycle, depending on the patient's degree of sensitivity to grains or cattle family meats.

On a rotation diet, you eat members of the same biological food family on the same day because foods in the same family have similar antigens. The classification of the plants and animals we use for food is not an exact science; thus, various classification schemes dif-

fer on the level of relatedness they assign to some foods. What one botanist or zoologist calls a family, another may call a suborder, meaning that the foods are less closely related than on the family level.

In my opinion some allergy patients cross-react to foods related on a higher classification level than the family level, such as the suborder or order level. I have talked to several people whose sensitivity to amaranth carries over to quinoa, or vice versa. This may happen because amaranth and quinoa are in different families in the same order. Personally, I have reacted to several kinds of fish I had never eaten before. When I looked up what they were related to, I found that they were in the same suborder as kinds of fish to which I was already sensitive, although they were not in the same family.

Because some allergy patients seem to cross-react to foods which are related on the order or suborder level, the complete classification of the plants and animals we use as foods is listed in the back of this book, rather than just a listing of the food families. Using this complete classification, you can rotate foods at whatever level you personally need.

The food family tables in this book list members of the same species on the same line. When you "split" food families as part of your rotation, you may wish to keep all of the members of the same species on the same day because they are very closely related – so closely related that they can interbreed. For example, you will find beets, sugar beets, and chard all listed together because they are the same species. I always keep chard and beets on the same day of rotation, even when I "split" spinach off to eat it two days later. In the cases of the bean and cabbage families where there are several foods in a single species, a small list of foods is given for that species.

For more information about rotation diets, see pages 8 to 9.

HOW TO USE THE ROTATION DIET IN THIS BOOK

A rotation diet can seem confusing, overwhelming, or confining at first. However, like hearing aids, bifocals, or any other health aid, once you get used to your rotation diet, it will become easier to use and your health will be improved by using it.

The rotation diet in this book is designed to help you get started on rotation. It is not set in stone and can and should be individualized. Rotation group numbers (written as [64], for example) are listed with each food so you can easily move whole families of foods from one rotation day to another. For example, if you find that you do not have any vegetables that you like or can tolerate on one day of the diet, but have two families of vegetables on a different day, move one of those families to the day on which you do not have

vegetables. (Be sure to move ALL of the members of the family or all of the foods with the same rotation group number). You might instead choose a vegetable family from the "extra foods" list and assign it to the day on which you have no vegetables. If your doctor allows, another option is to "split" a food family, eating some members of it on the day of your cycle for which you have no vegetables, and other members two days later.

There are many options for variety on a rotation diet. In addition to moving foods permanently as described in the last paragraph, you can also move a food to another day temporarily if you want to try a recipe that does not exactly fit your rotation cycle or if you want to eat the food for a special occasion. For example, suppose that on your rotation diet you have assigned cranberries to day 1. If Thanksgiving falls on day 2 of your cycle, you can "borrow" cranberries from day 1 to make cranberry sauce with grape juice (a day 2 food) to go with your turkey (also a day 2 food). If Thanksgiving falls on day 3 of your cycle, "split" cranberries from blueberries to make cranberry sauce with apple juice and eat buffalo for your meat on day 2 so you can have turkey on day 3. If you are "borrowing" a food that is not a major problem for you and moving it only one day (such as turkey in this situation), you will probably do all right eating it at a five day interval one cycle and a three day interval the next. If the food is one that you do not tolerate well, you might be better off to omit it from the short cycle so you do not eat again it too soon.

Some people can eat no gluten (due to celiac disease or allergy) or no grains (due to allergies to all members of the grain family). The inclusion of gluten-containing grains in the diet in this book does not imply that celiacs or people with any type of gluten sensitivity should eat gluten-containing grains. They are included in the standard rotation diet to contribute to the nutrition of those who can tolerate them. Do not eat any food on the diet if you are allergic to it or intolerant of it.

Ask your doctor for advice on how you should rotate the grains you tolerate. Some doctors permit their patients who are not extremely grain-sensitive to have a grain on each day of their rotation cycle. (If this is what your doctor tells you to do, you can use the grains section of the diet each day). Other patients may be allowed to "split" the grain family. They are advised to have two grain days out of their four rotation days, with different grains assigned to them, and with non-grain days between them. In this case, you could eat, for example, amaranth and arrowroot on day 1, rye and teff on day 2, quinoa and tapioca on day 3, and oats and rice on day 4. Because some doctors allow their less sensitive patients to eat a grain or cattle family meat on each day of their diet, each of these foods has a different rotation group number in this book even though they are all in the same grain or meat family.

You will notice that the rotation diet in this book contains a long list of "extra foods" that are not assigned to a specific day. One purpose of the extra foods list is to give you flexibility. For example, the families containing beef, white potatoes, and lettuce are in

the extra foods list because it is usually possible to get these foods plain in a restaurant. Thus, you may want to save these foods for when you eat out so you have the flexibility of eating out occasionally when you find it necessary or convenient rather than being restricted to eating out only on potato-and-lettuce day.

Other foods, such as tomatoes (which should be rotated with potatoes, since they are in the same family), seasonings in the mint and onion families, carrots and celery, are on the extra foods list to allow you more versatility in your cooking. You can use carrots in chicken soup one cycle and in game stew the next, rather than always being stuck with carrots on "chicken day." Be sure to write down when you use an extra food on your calendar so you will wait at least four days before using it again.

Foods such as wheat, corn, cow's milk, legumes, and citrus fruits are on the extra foods list because they are common allergens. If you have a "borderline" allergy to them, you may need to rotate them at a longer interval than less allergenic foods. However, if you tolerate them well, you can assign them to any rotation day you choose.

Finally, many foods are on the extra foods list because we have so many foods to choose from that it would complicate the diet to assign all of them – especially the ones that are less readily available – to specific days.

As you plan your rotation diet, the process of moving and shuffling food families between days, remembering to move the whole family or correctly "splitting" families, etc. can seem daunting. If you need help making the rotation diet in this book "fit" your doctor's advice and your allergies or if you need to "start from scratch" on a diet, customized rotation diets will be available starting in 2007. Visit www.food-allergy.org details about when they become available, price, and ordering information

When you first start a rotation diet, you may have to modify the diet based on your reactions. If you find that you are reacting to foods that you previously did not suspect to be problems, eliminate these foods from your diet, at least temporarily, and replace their food families with others from the "extra foods" section. This situation is sometimes called "unmasking" because on a rotation diet the days off from a certain food allow your level of antibodies to that food to decrease. Then when you eat the food again several days later, there no longer are "masking" antibodies to diminish your reaction to the food.

After you have been on rotation for several months, if you find you are reacting to foods that you previously tolerated, you may be overloaded with seasonal pollens or other allergic exposures. These foods, which are tolerated at some times but not others, are your "borderline" foods. If you find that you are reacting to previously tolerated foods even after the time of allergic overload is over, you may need to change to a longer rotation cycle of five or more days.

Make use of a calendar with room to write on to help you with your rotation diet. Mark your rotation day numbers on the calendar. After many years of rotating, I do not have trouble remembering which foods we eat on which days of the diet, but sometimes I cannot remember what day it is! In addition, if you use a food from the "extra foods" section of your diet or rotate some foods on a more flexible longer cycle, record on your calendar when you use them. Then you will know how soon you can use them or another member of their food family.

Your health is important to all of the members of your family, so take the time to make some special treats for yourself as well as for other family members. For example, make yourself a large batch of "special" pizza and freeze some. Then the next time your family or friends decide to order pizza, you will be prepared with a pizza you can eat.

Freeze portions of allowable desserts for each day of your rotation cycle. When there is a birthday party or when others are having a treat, pull your dessert out of the freezer and join the celebration.

If you eat out or travel, you may find it difficult to stay on rotation. It is better to eat a food to which you are not allergic but which you just had yesterday than to choose a food to which you are allergic. This advice also applies in other situations. For example, in the pizza illustration above, it would be better to eat your special pizza from the freezer even if it is made with the same grain you ate yesterday than to eat the "normal" pizza.

Occasionally I am asked how much of each food should be eaten on a rotation diet. Assuming you are not eating sugar or foods to which you are allergic, your hunger should be a good indicator of how much food you need. You should not need to weigh portions or count calories because weight tends to normalize when food allergies are controlled and allergic cravings and food addictions are eliminated. If your weight is not beginning to normalize after several months on a rotation diet that eliminates ALL of your problem foods, you should be evaluated for thyroid or other metabolic problems. Individuals with Wilson's disease can exhibit symptoms of hypothyroidism in spite of normal blood tests for thyroid hormones because their thyroid hormones do not have normal activity in their bodies.[1]

Although you do not need to count calories or weigh portions, you should try to eat a balanced diet, getting complex carbohydrates, protein, a little fat which includes essential fatty acids, and lots of vitamins and minerals from vegetables and fruits, as tolerated. Those of us with food allergies may not find it reasonable to follow the USDA's food pyramid strictly and eat eleven servings of grains per day. I have talked to more than one person who developed food allergy symptoms when they decided to eat a "healthier" diet including large quantities of grains. This made their latent grain allergies more pro-

nounced. If you are allergic to a few grains, you may have some degree of allergy to all of them, so do not overeat your safe grains. Let common sense, your body, and your doctor be your guide to how much of any food you should consume on a rotation diet.

Keep yourself from getting too hungry or feeling deprived. This will increase your ability to resist eating your problem foods and thus will improve your health. After you have successfully eliminated your allergic foods for the length of time your doctor suggests, you may be able to add them back to your diet in moderation and on a rotated schedule.

A rotation diet alone is not "the answer" to food allergies. You must also get to the root of your problem, pursue appropriate treatment for the underlying causes of your food allergies, and heal your leaky gut. However, a properly used, highly diversified rotation diet will give you the most nutrition for the least amount of allergic reaction. Improved nutrition can only lead to improved health.

FOOTNOTES

1. Interview with E. Denis Wilson, M.D., "Wilson's Syndrome: New Light on Thyroid Dysfunction," *Mastering Food Allergies Newsletter,* #71, January/February 1993, pp. 4-7.

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