

1. Historical background of food allergy

by Lisa A. Lundy

It is relevant, pertinent, and quite important to provide a brief review of the history of food allergy. For more than two thousand years there has been medical recognition that food can cause illnesses, diseases and health concerns for some people. Hippocrates was a Greek physician who is considered to be the *Father of Medicine* according to the Merriam Webster Dictionary. Over two thousand years ago Hippocrates¹ wrote about the negative effects that food could have on different people:

“For cheese does not prove equally injurious to all men, for there are some who can take it to satiety, without being hurt by it in the least, but, on the contrary, it is wonderful what strength it imparts to those it agrees with; but there are some who do not bear it well, their constitutions are different, they differ in this respect, that what in their body is incompatible with cheese, is roused and put in commotion by such a thing; and those in whose bodies such a humor happens to prevail in greater quantity and intensity, are likely to suffer the more from it. But if the thing had been pernicious to the whole nature of man, it would have hurt all.”

Historically, physicians were recognized for being able to treat their patients' illnesses by diet manipulation. An example of this written about 200 years ago and credited to Matthew Baillie² is as such:

“To judge of the true skill and merit of a physician requires a competent knowledge of the science of medicine itself; but to gain the good opinion of the patient or his friends, there is perhaps no method so ready as to show expertness in the regulation of the diet of the sick. Discretion and judgment will, of course, be required; the rules should not be unnecessarily severe or rigid, otherwise they will not be followed; but the prudent physician will prescribe such laws as though not the best, are yet the best that will be obeyed.”

Moving into the early 1900's there is a plethora of medical writings that support the fact that foods are a problem for some individuals and can cause a whole host of medical illnesses and diseases. One of the physicians who made substantial contributions to the area of food allergies was Dr. Francis Hare of Brisbane, Australia. In 1905 Dr. Hare wrote a two-volume 1,000 page book titled *The Food Factor in Disease*³ which was a result of his observation in 1889 that migraine headache incidentally was relieved when the patient was put on a special diet that largely excluded fats, carbohydrates, and saccharine alcoholic drinks. Dr. Francis Hare sought to explain that a whole host of diseases were related to food allergies including migraine, asthma, gout, nervousness, epilepsy, mania, dyspepsia, biliousness, headache, bronchitis, eczema, hypertension, gastrointestinal disturbances and other degenerative diseases.

But Dr. Hare was only one of many physicians that were discovering what Hippocrates had written over two thousand years ago. **In 1906, Dr. Clemens Von Pirquet⁴ suggested the use of the word “allergy” to describe an inappropriate reaction to food or other substances not typically harmful or bothersome.** A physician in England, Dr. Alfred Schofield, wrote in 1908 about successfully treating a boy who suffered from angioedema and asthma because of an allergy to eggs.⁵ This egg desensitization was confirmed by Dr. Keston, Dr. Walters, and Dr. Hopkins.⁶ Thus, nearly one hundred years ago physicians were successfully treating patients with food allergies.

¹ Adams, Francis. *The Genuine Works of Hippocrates*. Baltimore: Williams, 1939.

² MacMichael, William. *The Gold-Headed Cane*. New York: Hoeber, 1926. p. 223.

³ Hare, Francis. *The Food Factor in Disease*. London: Longmans, Vol. I, II, 1905.

⁴ von Pirquet, C. Allergie. *Munch Med Wochenschr* 52:1457, 1906.

⁵ Schofield, Alfred T. *A Case of Egg Poisoning*. London: *Lancet*, 1908, p. 716.

New York physician Oscar Schloss reported a similar experience as that of Dr. Schofield in 1912.⁷ In 1917, the *Journal of Urology* published an article by Dr. Longcope and Dr. Rachemann describing six patients who reacted to foods with urticaria and renal insufficiency.⁸ The *Archives of Internal Medicine*, *Journal of the American Medical Association*, and *Annals of Clinical Medicine* would all publish medical articles on the relationship between food and medical illnesses by Dr. W. W. Duke from 1921 to 1923.^{9, 10, 11}

A major contributor to the study and advancement of food allergies was Dr. Albert Rowe who in 1931 published a book called *Food Allergy: Its Manifestations, Diagnosis, and Treatment*.¹² Dr. Rowe documented that food allergies can cause a wide range of symptoms affecting any part of the body, and that allergies can show up at any age. Forty-One years later, Dr. Rowe and his son co-authored another book on food allergies titled *Food Allergy: It's Manifestations and Control and the Elimination Diets – A Compendium*.¹³

Dr. Warren T. Vaughan began studying food allergies in 1932. Dr. Vaughan studied an entire village of 508 people who lived in and around Clover, Virginia in 1934. Of the population that he studied, ten percent had allergies severe enough to require medical attention and another 50 percent had minor allergies, which meant that 60 percent of the population studied, had some degree of allergy. Dr. Vaughan took his survey one step further and looked at the possible causes for the allergies. Out of the 60 percent of people who had major and minor allergies who where were able to attribute symptoms to definite causes..."62.6 percent reacted to foods, 23 percent to inhalants, and 14.4 percent to contact allergies."¹⁴

In 1941, Dr. Vaughan published a book called *Strange Malady*¹⁵ in which he presents the multiple manifestations of food allergy and the interplay of food reactions with other environmental exposures and concealed excitants. In *Strange Malady* Dr. Vaughan states three key points: **food allergies or sensitivities are the most common form of human allergy, a person can become sensitized to any food, and it is unusual to be allergic to just one food.** Several years later in 1948 Dr. Vaughan published a book called *Practice of Allergy*¹⁶ further adding to the knowledge of food allergy that already existed.

Also making additional substantial contributions to books published on the topic of food allergies and allergies in general was a Dr. Arthur Coca. Dr. Coca authored *Familial Nonreaginic Food Allergy* in three editions, which were published in 1942,¹⁷ 1945,¹⁸ and 1953.¹⁹ One of Dr. Coca's significant

⁶ Keston, B, Walters, I & H, Gardner J. Oral Desensitization to common foods. *J Allergy* 6:431, 1935.

⁷ Schloss, Oscar M. A Case of Allergy to Common Foods. *Am J Dis Child*, 3:341, 1912.

⁸ Longcope, W.T., and Rachemann, F.M. Severe renal insufficiency associated with attacks of urticaria in hypersensitive individuals. *Journal of Urology* 1:351, 1917.

⁹ Duke, W. W. Food allergy as a cause of abdominal pain. *Arch Int Med* 28:151, 1921.

¹⁰ Duke, W. W. Food allergy as a cause of bladder pain. *Ann Clin Med* 1:117, 1922.

¹¹ Duke, W. W. Meniere's syndrome caused by allergies. *JAMA* 81:2179, 1923.

¹² Rowe, Albert H. *Food Allergy: Its Manifestations, Diagnosis, and Treatment*. Philadelphia: Lea & Febiger 1931.

¹³ Rowe, Albert H., and Rowe, A. Jr. *Food Allergy It's Manifestations and Control and the Elimination Diets – A Compendium*. Springfield: Thomas, 1972.

¹⁴ Vaughan, Warren T. *Practice of Allergy*. St. Louis: Mosby, 1948.

¹⁵ Vaughan, Warren T. *Strange Malady*. New York: Doubleday, 1941.

¹⁶ Vaughan, Warren T. *Practice of Allergy*. St. Louis: Mosby, 1948.

¹⁷ Coca, Arthur F. *Familial Non-Reaginic Food Allergy* 1st edition, Springfield: Thomas, 1942.

¹⁸ Coca, Arthur F. *Familiar Non-Reaginic Food Allergy* 2nd edition. Springfield: Thomas, 1945.

¹⁹ Coca, Arthur F. *Familiar Non-Reaginic Food Allergy* 3rd edition. Springfield, Thomas, 1953.

observations was that exposure to food allergens resulted in a change in the pulse of the human body. *The Pulse Test* was published as a tool for the layman in 1956.²⁰

The Pulse Test outlines the direct relationship between food allergies and backaches, headaches, epilepsy, diabetes, ulcers, hemorrhoids, obesity, hives, fatigue, migraine, high blood pressure, depression, and even multiple sclerosis with the most fascinating case histories and references to successfully treated patients.

Dr. Arthur Coca was not just any other allergist who discovered that food allergies had a significant relationship to illness, diseases, and health and well being. Dr. Coca had more accomplishments than most medical physicians ever dream of. Dr. Coca was the founder and first editor of the *Journal of Immunology*, which is still the foremost medical publication in its field. He also served on the editorial boards of the *Journal of Allergy*, the *Journal of Investigative Dermatology*, and the *Journal of Applied Nutrition*. He taught at Cornell, the University of Pennsylvania and Post-Graduate studies at Columbia University. He was also Honorary President of the American Association of Immunologists. And he was a member of many other medical organizations like the American Association for Cancer Research, the American Society for the Study of Allergy, and the Society for Experimental Biology and Medicine. Dr. Coca and the other pioneers in allergy were no ordinary physicians; they had more credentials than most physicians had at the time or have now in current day time.

Yet another major contributor to the field of food allergies was a physician by the name of Dr. Herbert Rinkel. In the 1930's Dr. Rinkel described the very nature and cyclic concept of food allergy, the individual deliberate feeding test, and the rotary diversified diet. *Food Allergy* published in 1951 by Dr. Rinkel, Dr. Theron G. Randolph, and Dr. Zeller was a comprehensive book covering the nature and cyclic concept of food allergy, the deliberate feeding test and the rotary diet.²¹

According to Dr. Lawrence D. Dickey²², "Dr. Rinkel's last major contribution had to do with the symptom-provoking and relieving food test which was presented at the First International Congress on Food and Digestive Allergy in 1963,²³ nine days after his death. Dr. Rinkel's presentation was delivered by Dr. Dor Brown." It should be noted that Dr. Rinkel and co-authors work was presented at the First International Congress on Food and Digestive Allergy which speaks to the international recognition that exists for Dr. Rinkel, et al's work. It also speaks to the global recognition that food allergies are a significant problem.

Dr. Rinkel's observations of reactions to 2-closely spaced feedings after at least 4-1/2 days of avoidance can be traced back to Hippocrates who wrote over two thousand years ago:

"Such persons, provided they take dinner when it is not their wont, immediately become heavy and inactive, both in body and mind, and are weighed down with yawning, slumbering, and thirst: and if they take supper in addition, they are seized with flatulence, tormina, and diarrhea, and to many this has been the commencement of a serious disease, when they have merely taken twice a day the same food which they have been in the custom of taking once.".....

Hippocrates also wrote:

²⁰ Coca, Arthur F. *The Pulse Test*. New York: Arco 1956.

²¹ Rinkel, H.J, Randolph, T.G., and Zeller, M. *Food Allergy*. Springfield: Thomas, 1951.

²² Dickey, Lawrence D., The food factor in disease: its history & documentation. *Clinical Ecology*. Vol. 1, No. 2, pgs 67-68. Fall/Winter 1982-83.

²³ Rinkel H.J., Lee CH, Brown, D Jr. Willoughby JW, and Williams JM. The Diagnosis of food allergy. *Arch Otolaryng* 79:71.; 1964.

“...if a patient fast for the first two or three days and take food of a heavy nature on the forth and fifth, he will be much injured.”²⁴

An internationally known and renowned allergist who made remarkable contributions to the field of allergy was a Dr. Theron G. Randolph. While Dr. Randolph did not begin in private allergy practice until 1939, his interest in allergy was clearly evident when he attended a national allergy meeting during his senior year of medical school in 1933. During that same time he also attended a national meeting of the American Association of Immunologists, and heard the presidential address of Dr. Arthur F. Coca, a man Dr. Randolph would later become friends with. Dr. Randolph was the third person trained through a Fellowship offered by the Harvard Medical School and Massachusetts General Hospital.

Dr. Randolph's bibliography of published articles and presentations is both extensive and diverse. Throughout the course of his career, Dr. Randolph published and presented over 393 articles, books, or presentations.²⁵ He was internationally known making many presentations to international meetings like the 1st and 3rd International Congress of Social Psychiatry, the First International Congress on Food and Digestive Allergy in Vichy, France, and 3rd World Congress of Psychiatry to name a few. Dr. Randolph was also called upon to provide his testimony to the United States Government on several different aspects of allergy during the course of his brilliant career. A career which incorporated relationships with Dr. Coca, Dr. Rowe, and Dr. Rinkel.

To put the medical research of the early 1900's into perspective relative to life at that time, life was very, very different. At the turn of the century there were no cars zooming around the United States as that would come later. Henry Ford founded the Ford Motor Company in 1903 with the first Model "T" being produced in 1908. The Manhattan Bridge would not be completed until 1910, and the Holland Tunnel and Lincoln Tunnel, two tunnels connecting New York State and New Jersey for automobile transportation would not be completed until 1927 and 1937 respectively. A refrigeration process for meat cargoes was not developed until 1934, which meant that you had to obtain your meat from a place close to where you lived.

In these early days of medicine and allergy, there were no computers, no short wave radio, no Televisions, and no mass transportation systems. But there was also no pollution from automobiles, trains and airplanes, no preservatives or mass produced foods, no chemicals and no pesticides. There was no plastic. Life was radically different in the early days of medicine. A Physician would make an observation in his or her medical practice, from which he or she would develop a theory or hypothesis. The physicians of the time would then test their theories out with the patients that they cared for. Physicians practiced independently prior to the advances of the railways, automobiles and airplanes. Yet, for over two thousand years physicians independently came up with the same conclusions all over the world: food allergies can cause illness, disease and poor health.

There was also a recognition that people react differently to foods, and that a food, which is a problem for one person, may not be a problem for another person. In the past physicians were judged by their ability to treat their sick patients by diet manipulation. There was complete medical agreement that food allergies could cause nearly every disease and illness known to man. But of course, this was all years before the advent of the Food and Drug Administration, the availability of pharmaceutical drugs, pollution, pesticides, and chemicals.

²⁴ Adams, Francis. *The Genuine Works of Hippocrates*. Baltimore: Williams, 1939.

²⁵ Randolph, Theron G. *Environmental Medicine-Beginnings & Bibliographies of Clinical Ecology*. 1987. Clinical Ecology Publications, Fort Collins, CO. Pgs 349-357.

The vast majority of the current medical profession knows little or nothing about food allergy symptoms, the ways that foods can negatively impact an individual's health and the diseases related to food allergies. The current medical profession knows more about dispensing a pharmaceutical drug than they do about food allergies. It is certainly less expensive, not to mention less invasive to rule out food allergies in the course of helping a patient who is experiencing health concerns. However this is never routinely done in the present medical establishment.

Most allergists only test for IgE (immediate and more serious) allergies which accounts for only 5-10% of food allergies. And most people with serious and immediate reactions already know that they have a problem with food and they also usually know which food is the problem. It has been stated that IgE mediated food allergies will present within one hour of food ingestion. Delayed food allergies account for 90-95% of food allergies, and this is the one area of allergy that is sadly lacking in terms of the availability of treatment options, recognition of prevalence, and acknowledgement of the wide variety of illnesses, and diseases that are due to the delayed allergies. Medically it is documented that delayed food allergies are the most difficult to pinpoint because of the cyclic nature of their being and because of a medical phenomenon called "masking".

Some delayed food reactions will not appear for several hours while other delayed reactions to foods will appear only after two or more days. Therefore without a complete elimination diet or medical testing it is nearly impossible for a patient to discern if a reaction experienced from food was from food eaten that day or days prior. Elimination diets are difficult for patients to do and are impacted by noncompliance. Deliberate food tests or challenges are extremely time and labor intensive and have other issues as well. It was because of this exact issue that more precise and comprehensive testing, intradermal neutralization testing, came into being.

A relatively recent study demonstrated that 93% of 88 children with severe, frequent migraine recovered on a special diet.²⁶ Another article reviews 40 children with severe eczema who had not responded to conventional treatment; 100% of these 40 children improved on a hypoallergenic diet.²⁷ These medical conditions have been historically proven to be related to food allergy. Yet, in present day time, it is as if the authors of such studies have "discovered" some new phenomenon.

The list of physical illnesses, diseases and health related problems that can be explained primarily by this type of allergy includes asthma, hay fever, itchy skin, headaches, fatigue, nausea, vomiting, hives, stomach pain, irrational behavior, edema (swelling), hyperactivity, muscle pain, joint pain, reflux esophagitis or acid reflux, back pain, acne, phlebitis, arthritis, anxiety, mood swings, dizziness or tingling sensations, diarrhea or persistent bowel problems, bad breath, constant congestion, irritating twitches, eczema, depression, inability to concentrate, and behavioral and emotional problems to name just a few. While there is no question that currently there is no mainstream conversation about the importance of and impact of food allergies on health, illness and disease, that fact does not erase over two thousand years of medical literature, research, and proof that food allergies can be a serious problem to many people.

²⁶ Egger J, Carter CM, Wilson J, Turner4 MW & Soothill JF. Is migraine food allergy? A double-blind controlled trial of oligoantigenic diet treatment. *Lancet* 2:865-869. 1983.

²⁷ Hathaway MJ, Warner JO. Compliance problems in the dietary management of eczema. *Arch Dis Childhood* 58:463, 1983.