SweetWater Health

Food Sensitivity Testing with Food Effect

There is nothing worse than leaving a doctor's appointment with the words "nothing can be done" ringing in your ear. These words are often accompanied by a prescription to relieve symptoms or a recommended surgery to patch the problem. Rarely does the patient get insight into the root cause of their affliction. An understanding of the root cause is the first step to curing the problem.

This is the unfortunate truth of so many ailments including Irritable Bowel Syndrome, Metabolic Syndrome, Arthritis, Hypertension, the list goes on. So many are left to fend for themselves or live with often toxic prescription medications, painful symptoms or worse. It was an "or worse" prognosis for his wife that led Dr. Authur Coca, a renowned immunologist from the 1930's to seek out a cure for his wife's angina pectoris. Two heart specialists predicted she would live maybe 5 more years. The immediate cause of her angina was a dose of a morphine derivative which would normally lower heart rate. Instead, her heart sped up to over 180 beats per minute. As an astute medical researcher, she commented that sometimes after some meals, her heart rate would also accelerate. This insight led Dr. Coca to develop The Pulse Test which was used to discover the foods that caused her heart rate to increase. They found that when these were eliminated, she was free from angina pain.

As an immunologist, he recognized that his wife was having an allergic reaction. He started to apply this theory to her other ailments such as migraine, colitis, syncope, abnormal tiredness and indigestion that they assumed were "part of life" and got excellent results. He subsequently used this technique on other patients and cured many ailments including hay fever, diabetes, hypertension, asthma, ulcers and more.

The allergic nature of these afflictions was not just proved by the mere fact that removing offending foods made the symptoms disappear, three other factors corroborated his hypothesis:

1. Many of his patients had comorbidities that all disappeared once the offending foods were removed.
2. In most instances the symptoms would return when the offending foods were consumed.
3. Without exception, the symptoms were accompanied by a speeding up of the heart.

Typically allergic reactions are overt – hives, facial swelling, dizziness, difficulty breathing and even anaphylaxis. Essentially, Dr. Coca expanded the symptoms of allergy from hay fever, asthma and hives to include high blood pressure, diabetes, seizures, stammering, brain fog, depression, tiredness, headaches.

And because these food allergens are not known, they are consumed on a regular basis and can result in chronic undiagnosable disease. This would explain the healing success of many people who follow the strict carnivore diet…total elimination of anything but meats (for the people not allergic to meats).

If this was happening in the first half of the 20th century when there was very little processed food, imagine what is going on now with the ultra-processed foods, lab grown meats, GMOs, canola oil, glyphosate (Roundup), herbicides, pesticides and who knows what else in our food supply. It's no surprise that Metabolic Syndrome, IBS, and Leaky Gut, none of which have a known pathology or 'cure" have become common place in our society. The Standard American Diet is just that, SAD.

Current State of Health

Research from the Harvard School of Medicine from 2022 suggests that anywhere from 6.5% to 8% of American children have a food allergy, while other studies have pegged the rate in adults at 10% or higher. These numbers are up from a 2017 review in The Lancet that reported 7% children and 6% adults at least one food allergy. There are estimates that food allergies have and will continue to increase at a rate of 1%-2% each decade. And these are the reported food allergies, likely accompanied by overt reactions.

Regarding diseases with no known (or not well understood) pathology, it is estimated that ~12% of the worldwide population suffers from migraines and around 20% of the adult population may have metabolic disorder. 10-15% of the global population is affected by irritable bowel syndrome (IBS) and 2.5% and 8% suffer from chronic fatigue syndrome and fibromyalgia respectively. This represents huge numbers of people suffering from what could be, according to Dr. Coca, the result of allergies, food or otherwise.

Obesity (and sadly childhood obesity) and obesity related diseases such as type 2 diabetes, increased risk of stroke, cancer and liver disease, has become epidemic. In addition to the associated health care costs, there are very real human costs here in terms of quality of life. Many overweight people think they are eating healthy foods, it's

just that the processed foods contain ingredients that cause low level inflammation, and they really don't have the tools to determine what they should and should not be eating. There is so much conflicting information out there, and one size does not fit all, so it is hard to figure out what works for each individual.

Modern Benefits of The Pulse Test

There are so many modern maladies that fall into what Dr. Coca categorizes as an allergic reaction. The question is what proof do we have that The Coca Pulse Test actually detects food sensitivities? In the 1930's, Randomized Controlled Trials (RCTs) were not the gold standard and Doctors worked on general knowledge and what today would be called 'observational evidence'. As there have not been any RCTs on this pulse test, there is no gold standard proof that it is detecting food sensitivities, and at the same time there is no proof that it does not. There is, however, modern proof and mainstream medical acknowledgement that allergies and exposure to allergens causes the heart rate to increase.

In a study by Monica Ruiz-Garcia, MD, PhD et.al. titled *Cardiovascular Changes During Peanut-Induced Allergic Reactions in Human Subjects* participants underwent double-blind placebo-controlled food challenge to peanut as part of a clinical trial. Changes in heart rate, stroke volume, blood pressure, and peripheral blood flow during food challenges were assessed using noninvasive continuous monitoring. The results showed significant decrease in stroke volume, increase in heart rate and increase in peripheral blood flow and blood pressure, irrespective of reaction severity. With regards to the pulse test, this study consistently showed an increase in heart rate whether the reaction was mild or severe (anaphylactic). The hypothesis in this study centered around the reduction in stroke volume as a mechanism for the increased heart rate.

Furthermore, there are abundant studies in the National Institute of Health database indicating that exposure to allergens cause histamine to be released causing vasodilation leading to a drop in blood pressure. In response, the heart rate increases in order to normalize the blood pressure. In a review by Yuichi Hattori et. al. titled *Regulation of the Cardiovascular System by Histamine* The abstract states that "Histamine mediates a wide range of cellular responses, including allergic and inflammatory reactions, gastric acid secretion, and neurotransmission in the central nervous system. Histamine also exerts a series of actions upon the cardiovascular system but may not normally play a significant role in regulating cardiovascular function. During tissue injury, inflammation, and allergic responses, mast cells (or non-mast cells) within the

tissues can release large amounts of histamine that leads to noticeable cardiovascular effects." This paper goes on to talk about the role of cardiovascular H_1- and H_2-receptors in the Histamine response.

Similarly, N.A. Mokhort et.al. stated that "Histamine was found to suppress the myocardial contractile function, to decrease systemic arterial blood pressure and to exert a positive chronotropic effect in unanesthetized dogs. A preliminary blockade of H1-receptors prevented the hypotensive effect of histamine, blockade of H2-receptors prevented the development of the positive chronotropic effect." Note that the decrease in stroke volume referred to in the peanut challenge study above, was theorized to be due to decreased contractile function observed here which led to increased heart rate (chronotropic effect).

The general understanding is that histamine can cause a heart rate increase via a few mechanisms involving H1 and H2 receptors. When histamine interacts with H1 receptors on blood vessels, it prompts them to relax and widen, leading to a drop in blood pressure which is then normalized by increase heart rate. The H2 receptors in the heart interaction with histamine stimulate the heart's pacemaker cells causing them to fire more frequently.

The Pulse Test App

Sweetwater Health recognizes the urgent need for people to have a non-invasive food sensitivity test that they can do at home. We have implemented the Coca Pulse Test into our Food Effect app for iPhone and Food Effect app for the Apple Watch making food and meal testing simple and affordable.

Food Effect for Apple Watch is a very basic implementation of the pulse test and requires very little interaction. Simply wear your watch to bed (or put it on before you get out of bed), then when you are ready to eat open the app and press "Start Meal". When you are done press "End Meal" then go about your day. In 90 minutes, you will have a result!

Food Effect for iPhone has the added features of entering your foods into the app, uploading the session and measuring your HRV during the meal using a chest strap or heart rate patch. This is just more information for those who want to take food testing to the next level!

Food Effect test subjects have identified otherwise unknown food sensitivities as can be seen our case studies document.

Summary

With the increased number of people with diseases that how no known pathology and no clear cure, combined with our incredibly unhealthy food supply, the time is ripe for an at home food test. More and more people are wanting to get healthy and want to take their health into their own hands. Food Effect is the perfect starting point for discovering the low hanging fruit that could be causing untreatable symptoms.