I've started our recording and I want to welcome you all to Part 2 of Understanding Allergy and Asthma. One of the reasons I am so excited about this course is because it is the type of inflammatory challenge that pretty much all of us are going to see not just occasionally but very frequently in our practice. You probably already have clients who have various types of actual food allergies or people who struggle with asthma. Or who have family members who do.

It is really very common in my practice. Unfortunately I think it is becoming increasingly common (for reasons that I am sure you are beginning to understand more and more clearly) with this external, over-reactive, adaptive immune response. I am looking forwards to diving deeper today into the topics of reactions to food and also into what can manifest from those reactions to food as well as other symptoms which is asthma. And then we are going to talk about some natural solutions and remedies.

As always as we dive into our webinars here I just want to remind you that this session is being recorded and that archives for it will be available by tomorrow morning. I do encourage you, as always, to make time in your schedule to review this session at least once preferable twice more. I really can't over emphasize how much repetition helps to lock in the retention of what you learn and your ability to recall it in individual client cases.

Now as I mentioned we are going to focus today in particular on food sensitivities and on diving into the topic of asthma. Also I want to spend a little bit of time emphasizing the gut connection. I have several pearls today that I think are perhaps going to really surprise you about just how involved the gut is, not just in creating the seeds for inflammation but actually being the trigger for some of these really debilitating A-toppy manifestations. And then, as I mentioned earlier, we will get into some Natural Remedies.

But first of all, I want to start with just a few key reminders about immunity from our first webinar on this topic. Hopefully you have all had a chance to review it at least a second time. We talked quite a bit about what healthy immunity is and that our immune system by-in-large is taxed with a pretty substantial challenge which is not only to identify self form other, that is what is stranger in our body, but also which of those strangers are dangerous. Our topics for this course, Allergy and Asthma, are unfortunately two of the most common manifestations of a body that is over reactive perhaps both on the stranger side and on the danger side.

Generally a healthy immune system's job is simply to surveil and not to react. To react appropriately the vast majority of the time to exhibit tolerance and when we no longer have tolerance to everyday types of things such as food and innocuous substances in our environment. Our immune system becomes overwrought in reacting to those things Allergy and asthma can easily be a manifestation to that along with other inflammatory symptoms.
As we have discussed before, when those symptoms and manifestations are simply left to become chronic and exacerbated, you can easily create the seeds for autoimmune disease.

We talked in the first webinar about the role of leaky barriers in creating the opportunity for certain pathogens or threats - even innocuous substances simply being in the wrong place - to trigger our immune system to react. We have covered how we have multiple layers of immune response going from non-specific barrier type of function to an innate immunity which is not molecularly specific but provides more of this broad-based type of control into the adaptive immunity function which is very highly specific.

We talked about how there is both cell-mediated and humoral elements of adaptive immunity and that the innate and the adaptive immune system work in really wonderful synergistic modes of communication in order to support each other in up-regulating or down-regulating the immune response as appropriate.

Now in the first webinar we talked quite a bit about allergic reactions, specifically those in the TH-2 adaptive immune response specifically mediated by IgE antibodies. The response that the body receives, or what we think of externally in terms of hives or the swelling of the mucus membranes or difficulty breathing, is caused by the effects of histamine in terms of immediate response.

Then later on the follow up of other inflammatory mediators, in particular leukotrienes. We talked about what the typical symptoms might be, but this tends to be an aggressive and immediate, sometimes violent, but very immediate and persistent reaction. Most people know what their allergies are; usually because they happen right away and it's easy to tag the source to the reaction.

I want to remind you of our discussion about the spectrum of immune system imbalance because what we have been focusing on is really the left side of this see-saw, of this spectrum. We can certainly do a course on the right-hand side as well because we struggle with that in our society also. But when we are looking at an over-reactive immune system, we tend to see a person move from the midpoint of balance and tolerance into a place of reacting more and more to supposedly innocuous or environmental triggers, things such as food.

As I mentioned earlier; if that is allowed to progress, it can get into the auto immune space. We talked before about some of the examples of these types of things that we might see and what they might eventually manifest as.

Certainly part of our opportunity as Health Coaches is to really help people identify where this is happening and to begin to help them through lifestyle change to shift from moving leftward - further along that spectrum toward a really undesirable end point - back to the place of balance between that TH-1 and TH-2 mediated immunity. Back to a place of more tolerance, so the immune system is having appropriate tolerance, neither under-reactive or over-reactive but appropriately reactive or appropriately tolerant.

I really love this quote from Dr. Kenny Bock. I have actually had the pleasure of seeing him speak a number of times and this is a quote from a book I highly recommend to any health coach actually. It is really wonderfully rich and a fantastic read. It has a lot of very specific recommendations in it for
children. It is called Healing the new Childhood Epidemics: Autism, Allergy, ADHD, and Asthma. He says: "The immune system creates all allergies. And allergies create most asthma. Imbalance in the immune system combined with widespread inflammation is the main reason why there is now an epidemic of asthma and allergies. We are a TH-skewed society. An over reactive in our immune system to the external. It is just one more result of too much toxicity."

He does a wonderful job in his book filling in the details of, as we discussed in our first webinar, all of these different sources of toxicity that are skewing our bodies' view of what's normal and what's not. In the same vein, our lack of ongoing exposure - especially as children - to what we call old friend microbes - exposure to a wider range of microbes. Where children are less and less likely to be playing in a wide variety of dirt and soils and handling animals and handling unusual plants and those kinds of things when the immune system is developing.

We end up with an immune system that has too narrow of a version of what is not strange and too narrow of a version of what is safe. We are constantly introducing toxins into the air we breathe and toxins through the water we drink and toxins through the personal hygiene products we slather on our skin - because remember we have learned: our skin is a big mouth, right? - and certainly toxins we ingest through our food.

Then we are constantly confusing our body as to what is friend and what is foe. I really can't recommend this book enough. Not only have I read this book a few times but I have given to many clients especially those who have children or who are struggling with themselves believing the concept that there is something that they can do to affect their Atopy symptoms.

I won't review all of these but just to remind you, this is a slide we have in the first webinar, about the fact that some of the key precedents and triggers of this type of Atopy are often found in the gut because that is where over two-thirds of our immune system is located. As Dr. Bock said, the inflammation that comes from our immune system is really at the root of these disabilities. And there are indeed many potential triggers and we are going to emphasize more of these today as we are talking specifically about food sensitivities and asthma.

As you can very well see, there are a number of things here that we can help our clients to understand and to be aware of in making lifestyle change. In particular I think it's critical that our clients understand that our immune system is housed by our gut primarily and that what we put in there on a regular basis is usually a big part of the problem or the solution.

It is important to realize that even though we are talking sometimes in these courses about much more esoteric concepts that the basic things that we, as health coaches, know to do to help people to live a healthier life style are actually extremely high leverage choices. Things like eating organic food. Eating whole natural food. And as I like to say, whole food is what my grandmother could have eaten because it actually existed when she was alive.

Things like not eating genetically modified foods, not eating artificially sweeteners and colors and flavoring. It never ceases to amaze me how often a simple supplement, for example, will be made toxic with the need for an artificial strawberry sweet flavor and a bright red coloring. Other things that we
consume, things like medications, without understanding the impact of them on our gut. Then the
dynamic of a leaky gut; I am going to talk about that quite a bit more today, but intestinal permeability is
a very key trigger for up-regulating our immune system's response to these things.

The average person does not have any idea that what I just described is taking place in the vast majority
of individuals today living in the modern world. An interesting comment that I wanted to make here
also: a really interesting study that TH-2 dominance can actually begin in-utero with the fetus, prior to
birth. Based on the mother's intake of things like antibiotics and highly processed food and others sorts
of toxins or medications.

This makes sense because certainly the immune system penetrates the umbilical cord. Obviously the
fetus has to be served by an immune system, so it makes sense that there is learning going on, certainly
genetic mutation going on as well. For those of you in the semester course, we’ve talked at length about
epi-genetics. Also in addition to the very, very slow, gradual evolution of the human DNA, we're
experiencing much more rapid response to our environment via the science of epi-genetics. Which is
really an inherited tweak in the genome based on the environment that one's parents or grandparents has
experienced. And TH-2 dominance not only can affect the immediate generation but can also have
epigenetic changes.

We talked at length about intestinal permeability and how there are a number of different, very common
modern practices that cause it. Anything from taking a course of antibiotics at the first sign of the
sniffles to high intake of gluten-containing, floury foods to chronic stress to low vitamin D to taking an
Advil every morning just in case my back pain shows up again. My goodness, so many opportunities for
us to help clients understand that there are changes they can make which will make a difference.

Okay, so with a few of those reminders of our discussion from the first webinar. I want to now pivot
from food allergies to the topic of food sensitivities, which is a continued discussion about adaptive
immunity in action. We talked before about IgE antibodies. Now I want to shift to talking more about
IgA and, in particular, IgG antibodies.

You'll remember the diagram at the bottom of this slide from our prior discussion about the role of IgA
for protecting mucus membranes; everything from the lips, to the lining of the gut, to the lungs. IgE is a
gate keeper for IgA. From our skin IgE reactions, we think about hives on the skin or the swelling of
mucus membranes like the lips or the nasal passages. But beyond that, assuming that a threat isn't quite
that scary to the body in order to have an aggressive, violent reaction, IgA plays a role.

What other adaptive immune responses could take place? Beyond whatever IgE outer first guard “test”
that substances have to pass, we come into the space of IgA, or primarily across the vast majority of the
body, IgG. In a typical human body, up to 75% of our total antibody count is IgG; this is the primary
antibody response that the human body has.

The IgG profile is really quite different from IgE, which is aggressive and very short lived. IgG
antibodies don't trigger histamine release and leukotrienes and from mast cells. IgG antibodies are
actually free circulating and they form complexes with the antigens themselves. They live in the body,
depending on the type, for quite some time. This is a challenge because when they build up, indicating
on ongoing exposure to something of concern by the body they become highly inflammatory. And unlike IgE, the effect lasts.

This is a reflection of what conventionally is called Type-3 hyper-sensitivity. You may remember we talked about Type-1 hyper-sensitivity being the typical IgE mediated allergy. Immune complexes, such as what are formed by IgG antibodies, is what we call Type-3 hyper-sensitivity and it is most typically triggered by IgG (though can sometimes be IgA antibodies and more seldom IGM). These responses are typically delayed.

This is why, for example, when someone has a food sensitivity to eggs, they may have had eggs yesterday morning for breakfast. But they don’t really start feeling poorly until tonight. It becomes very difficult for people to know what their sensitivities are. For reasons I'll explain in just a minute, we tend to become very sensitive to things that we eat all the time or even worse, things that we crave or particularly relish.

Now I want to talk a little bit about the diagram on the right hand side here, so you can see what we are talking about. You may remember from the first webinar we talked about antibodies being these molecules that look a little bit like a "Y" shape (this is an antibody) and the antigen - let's say it’s a molecule of a protein from egg. When we have antibodies to egg, then egg will bind to an antibody. If it is prevalent, especially if it's persistent (let's say I eat eggs for breakfast every other day), well then I am going to end up forming significant immune complexes. Even more so because the vast majority of antigens have more than one receptor site on their surface (remember we talked about this).

It is possible to get quite a cluster of them going and then these will actually bind to tissue and cause local inflammatory effects. This can happen at any place in the body (this might be the lining of an artery or the lining of the gut wall or it might be synovial fluid in a joint or cartilage in a joint) and inflammation coming from these immune complexes will very directly do damage to that tissue.

This is how something as seemingly innocuous as a bit of egg can end up being bound to something that eventually causes inflammation. Trying to explain to someone with chronic arthritis in their shoulders and knees that the eggs they enjoy for breakfast every day is what has been causing their arthritis is sometimes a tall order. Of course, if you can convince them to eliminate the offending food 100% and then to work on gut healing in order to reduce the permeability and then maybe support them with anti-inflammatory supplements - miracle of miracles: they feel better!

I have had a few examples with clients where not only have has joint pain gotten better but it has gone away entirely! It's pretty amazing. I'll talk in just a second about how leaky gut -once we have it - tends to create more and more sensitivities, but it's very often that people who have IgE allergies end up creating IgG sensitivities because histamine creates intestinal permeability.

Let's talk for a bit more about the lowly IgG antibody. There are several types and there's a huge amount of confusion in the medical media and a lot of myths and a lot of fear-mongering and a lot of websites, like Quackwatch.com, really promoting the bastion of conventional medicine that are ill-informed about the physiology here. These are very basic biochemical concepts.
There are four different types of IgG antibodies. Typically one in two are not food bound; that's not 100% true but it would be rare for them to be food bound. Generally, when we are speaking about reactions to food we are talking about IgG-1 and IgG-4. Of those two types, IgG-1, when it binds with something - some type of antigen - it activates complement. Complement, as we talked a little bit about in the first webinar, is a really wonderful advance clearance process that’s stimulated primarily in the liver that involves about twenty different compounds.

Basically it’s the immune systems response to be called up to come and attack and break down and get rid of whatever the antibody has bound to. In that process the body gets rid of the antigen and the antibody. So there is a clearance process that happens. This is why there sometimes is a lot of negative talk about measuring IgG antibodies because it's believed to be just part of the body's response to eating some food - and having IgG antibodies to it means you've eaten it - and that the body is responding and that the body will clear those antibodies and no longer be responsive.

However, IgG-4 specifically, does not bind with complement. When it binds with a food, it creates an immune complex that is just going to circulate until the random scavenging different immune cells in the body (like the macrophages, neutrophils) simply gobble up flagged debris for disposal. Eventually that will take place, but it will take place sooner in a healthier and stronger immune system.

It doesn't take much imagination to understand that if the body has enough of a persistent sensitivity reaction to something that’s eaten on a regular basis, there can be a lot of IgG-4 complexes building up. Eventually the presence of the IgG-4 antibodies themselves becomes something that IgG-1 would react to again.

Let me express that in a different way to make sure you understand it. Chronic exposure to a food trigger causes the body to switch from IgG-1 to IgG-4 response and then the ongoing build up of IgG-4 activation can create another IgG-1 cycle, which would perpetuate chronic inflammation. In this way the body can be reacting to some food that's eaten on a fairly frequent basis for years and years and have it cause some sort of chronic inflammatory symptom. Because these are circulating immune complexes it can take place as pain or discomfort in a part of the body that’s completely separate from the source.

So let's step back and take a little bit of a look at what this actually appears like. What you are seeing here is actually a micrograph of a villi. The foundation that you see at the bottom is one villi. If you blew it up to about the size of the room you are in, the fringe that you are looking at on top - that looks a little bit like carpet - is what are called microvilli. This is really the site of nutrient absorption in the body; this is where all the magic takes place.

When we talk about a leaky gut or intestinal permeability it is important to understand that we are talking about a legitimate leak. In a healthy gut, food is chewed and swallowed and denatured in the stomach and it movies down into the intestines and ideally we have plenty of digestive enzymes in order to break down that food - slowly but surely - until the particle sizes are small enough to fit though what are called tight channels in order to be absorbed into our blood supply.

The immune system sees little individual nutrients. Not a little molecule of egg or a little molecule of bread but an individual molecule of an essential fatty acid or an individual amino acid or an individual
molecule of vitamin A or of magnesium. The immune system expects to see those nutrients, so it is happy and calm. What were to happen if there was a leakiness? Literally, gaps in those channels or tight junctions would allow some of the food in a semi-digested state to get further down (remember the immune system “police station”, our GALT system) into the immune system and even potentially into our blood supply and essentially be on the wrong side of the tracks.

Then the immune system sees a partially digested molecule of egg, maybe a poly-peptide chain - something that was mal-digested (keeping in mind that some things like homogenized milk or gluten are fundamentally poorly digested by all human guts), our immune system is going to react to that. Once the immune system sees that foreign substance or that antigen the adaptive immune system can go through its response, which we studies last time, of triggering the helper t-cells - the TH-2 helper t-cells - in order to develop antibodies to the substance and then it is on the most wanted list within our body.

Then every time the immune system sees it and goes after it, it is targeting inflammation as the immune systems way of saying "oh my gosh its back again come quick, we need to fight this!" This happens to a lot of people; in my practice these are pervasive. I am amazed at how common food sensitivities are. Also amazed at how much better people feel once they discover what they are and eliminate them.

We do so many things, as we discussed, that increase this permeability in the gut lining. What we are seeing here is a very straight forward way in which the leaky barrier itself; the bad fence - as Dr. Bob Roundtree, in the functional medicine world likes to talk about. Good fences make good neighbors and bad fences create all sorts of problems that were nonexistent before. In this case, a perfectly innocuous food, like egg or milk, could simply be on the wrong side of the track and create a persistent inflammatory cascade.

Now, the categories of food sensitivity, it's not surprising, are essentially the same categories as the common food allergies. They are not 100% the same but are really quiet close. But of course there is a huge array of symptoms because we are not focusing just on histamine and the related leukotrienes and other inflammatory molecules being secreted from mass cells primarily.

What we are talking about is the full cascade of the various inflammatory cytokines and where those immune complexes might go in the body and lodge and cause their damage. Not just mucus membranes but anywhere. I am amazed at how often - for example I have highlighted it for you - I find that my clients with the neurological symptoms of brain fog, depression, perhaps anxiety and an inability to lose extra weight is a red flag for gluten sensitivity.

There may be no GI symptoms what so ever, there are no obvious other joint/muscle/nasal/respiratory symptoms, there may be none of that. I give you a clinical tip here - beyond the gluten one - I would encourage you to consider dairy sensitivity and those with a history of childhood ear infections and colic, especially if as an older child or as an adult there is a persistence of nasal or sinus or ear problems. I have found that to be a real pearl in helping individuals in making connections.

This is very important to understand. I am going to talk quite a bit about testing for food sensitivities, understanding that there are plenty of integrative and functional medicine practitioners who test always and there are plenty of practitioners who never test and instead will put their patients simply on an
elimination diet, which takes out all of the foods in the left hand column for a period of at least a month and then go through a very slow gradual process of adding them back, one at a time, in order to see what might trigger inflammation.

My experience is that some clients prefer one over the other. The vast majority of my clients prefer to test as a way of at least narrowing down the list of likely sensitivities just so that choosing foods during an elimination period isn't so complicated.

I do want to say - before I talk about testing - just a little but more about gluten and wheat. It is certainly the most common food sensitivity - one and two, even in the allergy world are dairy and gluten. It is important to understand, just as a side issue, that we are not talking about the entire immune system in this webinar; one does not necessarily have to produce antibodies to gluten in order for it to be a problem.

We talked before about the fact that gluten, in a number of people - especially those with the predisposition for auto immune disease - promotes the secretion of zonulin in the intestinal track. Which is naturally produced by the body in situations where the immune system needs to go into full tilt attack to counter something that is potentially life threatening. That's obviously not very useful when a food you're eating on a daily basis is doing the same thing.

Zonulin purposefully generates intestinal permeability. If you had a life threatening infection, you would want to open the flood gates of the intestinal barrier and allow the rest immune system to come surging into in order to kill it and you wouldn't really care about the permeability if that reaction was life saving. If you're just eating a bagel on a day over day basis, minding your own business - not threatened by any pathogen - than the average person doesn’t really understand that the daily intake of gluten could be slowly but surely creating intestinal permeability that will cause other food sensitivities or cause other a-topic disease.

I hope that really makes sense to everyone. Indeed gluten may not be a formal food sensitivity, in the sense of having IgGs to it but it could be a huge part of the problem. In fact it could be the instigator of the problem. Part of the healing is going to be to the need eliminate that gluten to allow the intestinal permeability to heal so that other food sensitivities can go away.

I have given you some more tidbits of gluten and wheat here but I just wanted to explain that dynamic. Very often I find that whether people have antibodies to wheat or not, sometimes wheat - or the larger category of gluten - is definitely part of the problem. If people are eliminating their severe and moderate food sensitivities and they're only getting a little bit of improvement or not much at all you may want to consider that wheat may be an additional elimination that has to be done in order for the healing to begin.

Let's shift gears and talk for a moment about testing. Food sensitivity testing is available in a variety of types. Individuals can have their blood tested for total amounts of IgG - that would include all four subtypes. In response to a list of foods there is a huge array of testing available. The most typical tests I find really come in two gradations: One that has maybe 30 or 40 foods and another one that had maybe 100 or 150 foods but there is a lot of variance depending on the brand and on the lab.
Total IgG tests, which are going to measure all types of IgG. IG-4 only, which is only going to pick up those that don't trigger complement, and therefore aren't inflammatory to themselves but are persistent and they are evidence of an ongoing persistent reaction to the whole IgG family. Or combined IgG/ IgA types of tests, these are the three antibody tests available in the sensitivity world.

To speak briefly to theses, the Total IgG tests - as you hopefully well understand now - are going to be quite vulnerable to false positives. They should definitely pick up the real food sensitivity that is those that are persistent - that the body really is being alarmed at - but it's going to be comingled with those that are more passive. So these tests are going to cast a broader net; you're going to have a few undesirables in your catch.

As a result, when my clients choose to get these tests done - and they are looking for help interpreting the results - I only ever recommend that they eliminate the moderates and the severe categories, not the mild's and certainly not the very lows or the very mild's (different tests have different categories for labeling). Or if there are three or more foods flagged in a category, regardless of the level, then I recommend an elimination of the entire category - just in case.

Using Total IgG tests is going to potentially be more burdensome to your clients because you're going to come up with a bigger list of things that are probably the problem. I am going to talk about elimination and reintroduction in just a second. Depending on who you tend to work with this may be a good strategy.

In my practice I tend to work with a lot of people with advanced gastrointestinal and/or auto immune disease. People are suffering really significantly. I find its often much more important to get them some substantial relief and they, in many ways, are certainly willing to over eliminate, if you will, in order to get relief. Then we can take our time a bit in reintroducing things in order to separate the true sensitivity form the false positive.

On the other hand you can test for only IgG-4 antibodies, which is highly unlikely to come up with false positives but what you might miss is a current transient sensitivity that’s in the process of moving from the IgG-1 to the IgG-4 category. I would say that amongst the IgG type of testing, this is the one that’s likely going to yield the most targeted need to eliminate. It’s the test that I definitely prefer.

As I am going to talk about in just a second though, part of the challenge in any of these tests is what people can get access to, what people can afford and what insurance is willing and able to cover. Then there is a test for combined IgG/IgA tests, which will highlight foods that are particularly inflammatory to the gut lining. This is really good for people who are looking at food sensitivities that necessarily go hand in hand with the sensitivity to gluten.

The Cyrex test in particular is recommended for cross-reactivity or triggered reactivity for those who have celiac disease. In order to really light up with a high score on this particular test, then the food needs to be triggering both IgG and IgA responses. Obviously that’s going to down play reactions that are only IgG mediated, so those results are going to be difficult to interpret.

In summary, I think it's important to remember that this type of testing is really just a dart board. It helps us to get a little more targeted information. Levels of antibodies are changing in the body all the time,
obviously in response to our diet and in response to our stress level. It's never going to give us an exact answer to the exact solutions that are needed. What it will do is hone down and help with choosing the eliminations that a client can try in order to achieve relief. I think it's important that we explain it that way, because there is so much controversy in the media. I am going to talk a little bit more about that in just a second.

Briefly, there are couple of other different types of food sensitivity testing. In particular I want to mention one that looks at the innate immune systems reactions to food, so this is not measuring antibodies at all. The example I am going to focus on is the ALCAT, which specially measures a change in the number and size of our white blood cells overall in response to a food trigger. This is looking at aggregate response in the immune system and is primarily going to pick up innate immune reactions.

As I mentioned earlier, there are a lot of different opinions and views on this. It is definitely not an exact science and you want to be careful about not representing it that way because clients, when they start to go do some research or start to chat with their physician about it, are going to hear a wide variety of opinions.

As I said before, I would really highly prefer IgG-4 testing. My preferred test is the MetaMetrix "IgG-4 Allergix Panel", but unfortunately the one that measures the larger list of foods (90 foods) is very hard to get outside of being able to send your client to, for example, a functional physician and getting a test from them.

All of the online resources that I am aware of at this time, where clients can get their own testing only offer the smaller one (it's a 30 foods panel), which is a great place to start but its only 30 foods and sometimes you can really miss the big triggers. Sometimes clients prefer the IgG-4, sometimes they prefer the Total IgG. Sometimes when they go to a physician the Total IgG is more likely to be covered by insurance.

In my practice I end up seeing a whole big variety of these things. Or in some cases, given what they share or what they have read, some clients just prefer to do the elimination diet and just get to feeling better sooner and figure it out later on. These are all certainly valid but I want you to be aware of and comfortable with some of the innate pros and cons of these different methods.

I do want to show you some of the actual testing. What you are looking at here is a fairly typical Total IgG antibody test. This is from Genova Labs and is arguable one of the highest quality Total IgG tests that you can get. They do all sorts of screening to try and eliminate false positives but are certainly still a little vulnerable to it. I also like the fact that, just as an aside here, Genova takes a look at total IgE levels, just in case. So that while you are looking at the IgGs maybe someone has an elevated level of IgE and they just don’t know it - maybe that would prompt them to investigate testing for IgE allergies as well. It’s a nice little adder.

You can see that, essentially for this test, individual foods are rated based on the blood sample's antibody response on a scale of zero to very low to low (which is +1), moderate (which is +2), severe (which is +3). You can see, this is an actual result from one of my clients - in the sense of helping them to see the
forest through the trees - in these results, I have gone through and highlighted the level two and three foods and this is indeed what I asked them to eliminate.

There are certainly many, many one level and very low levels, which would speak to the fact that their immune system is a little overwrought in general. As I explain to many of my clients, the goal here is to get the immune system and aggregate to calm down. The lowest hanging fruit solution for that is to get rid of the more prominent sensitivities. In my experience, it is not necessary to get all of the very low levels and the lows eliminated, and is indeed, as is the case for many people, just not possible.

Let's see, there is a question here. Yes, this client is sensitive to wheat but not gluten. You will find that is often the case. I find that is the case that happens for a good half of my clients. Keeping in mind that wheat is the grain that has over the top hybridized; to have too many more chromosomes than it did in the beginning. A person doesn't have to be sensitive or allergic to all forms of gluten.

In fact we talked in other courses about the fact that Rye, as a different grain, can actually be quite anti-inflammatory. So sometimes wheat can really be the problem, not so much gluten overall. There are a couple, actually three or four questions about elimination - I am going to get to that in just a second - I just want to show you the different forms of testing first of all.

This next page, this is an Ala-Test Total IgG data result here; same type of thing just a different scoring system - the classes here are 0, 1, 2 and 3. At the bottom of the page, that you can’t see, it gives you a range so you know what numbers correspond to the various classes. Essentially, 1's are mild's, 2's are moderates and 3's are severe's. Again, I have gone through with this client, in an effort to understand what's really significant vs. insignificant.

I wanted to use it as an example, for this client in particular. What I recommended that she eliminated was certainly all types of yeast, - based on this data - black pepper, peanut, coffee. Then, based on the fact that a couple of the cheeses and cow's milk showed up as moderate or severe, I recommended that she eliminate the entire category of dairy. Even though you could argue that, well Swiss cheese didn’t show up and yogurt didn’t show up (which sorry you can’t see that down here) whey didn't show up; but because there is enough obviously chemistry similarity in those foods we want to be sure that we are giving her a really good chance of relief.

One of the long discussions that she and I had was the fact that pinto beans showed up, that lima beans are a borderline two/high level one, and peanuts showed up - all of which are legumes. So we had this discussion about the fact that we might choose to eliminate all legumes, depending on how much relief she did or didn't get from the eliminations that we targeted.

Actually, this was an individual client of mine who was suffering with arthritis and this, combined with the anti-inflammatory agents I recommended for her, got rid of (as she says) literally 100% of her pain, as long as she was true to the eliminations. She struggled a little bit with the wheat one in terms of hidden sources. She was able to get rid of her pain and go back and do a reintroduction challenge for a lot of these things and found that she still reacted pretty strongly to dairy and wheat and also yeast.

Subsequently, I recommended that she get a stool test done - she was seeing a functional medicine doctor that I partner with at times - and went back to him and got a comprehensive stool test and indeed
she had intestinal yeast. Which I want to mention because this is a real pearl for you: Sometimes the reason why people's immune systems are so reactive to yeast in food is because they have been reacting to overgrowths of yeast in the intestines for a long time. The body isn't readily able to distinguish between a food based strain versus an overgrowth strain.

Please remember that as a pearl; when you see high sensitivity to yeast in food and a person has persistent inflammatory symptoms, or even worse persistent GI inflammatory symptoms, you might want to think about 'could intestinal yeast overgrowth be a part of the problem'.

This next page that you are looking at is an example of the results of the IgG-4 Only test. This is the MetaMetrix Allergix which is, as I mentioned, the smaller one of their profiles that only tests for 30 foods. This is quite limited in my view in terms of variety of foods. It really is the type of testing I prefer when I think that eliminations are going to be hard for people; especially for children.

It is much more important to make that that what you are highlighting for them is really going to get rid of their challenges. You can see here that both egg and milk showed up as severe sensitivities; and then mild reactions to a handful of things. Because IgG-4 testing is so targeted, I do recommend that people eliminate all of the foods that show up regardless of the level but that they be particularly diligent. For example, in restaurants: really telling people "I have a severe allergy to egg and milk so I need you to help me make sure that I don't get either of those things in my meal". And really represent themselves to make sure the elimination is cold turkey.

The next page, I apologies for how fuzzy it is; this is actually the best choice and I looked all over the internet for a better choice and I couldn’t find one. This is an example of Cyrex's combined IgG/IgA testing. This is for a particular patient, a young boy, who had celiac disease and you can see here just how damaging the effects of gluten can be in some people. This young boy has become essentially cross sensitive to a huge number of other foods.

Not only because some of these have some molecular mimicry with gluten, where the immune system thinks some these foods perhaps might look molecularly a little too much like gluten, but in other cases where intestinal permeability, which is horrible in those with celiac, has caused other common food reactions to take place. This is a case where much more of a comprehensive elimination diet is going to have it be perused for a while in order to allow let inflammation calm down.

I want to have fun with this one - I am actually going to show you my personal results here. This is Tracy Harrison's ALCAT test results from last year, maybe two years ago. There is a similar categorization here; you can see the severe, the moderate and the mild's in the red, orange, and yellow categories and then obviously the huge listing of things in the green, depending on the number of foods that you had tested.

They especially call out, in the lower left hand column, reactions to gluten or gluten containing foods; casein and whey, or dairy foods; and then Candida, specifically two Candida Albicans, which they test in addition to other types of yeast in foods. Remember this is, in general, a targeted assessment for essentially the responses in the innate immune system. Still paying heed to the fact that any part of our immune system can react to foods.
What I want to point out to you - and I am as good an example as any - is that different types of the immune system react to different foods. What you are seeing on the left hand side is Tracy's IgG-4 assessment just a few months earlier. You will notice that there is nothing in common between these assessments, literally nothing.

It was really good learning for me - well it was something I knew at least, it was something with my gut after I saw my own data - that in some cases your adaptive immune system reacts to something because your immune systems believes that is the best way to deal with the threat. In other cases your innate immune system deals with it.

Just like your body sends your innate immune system to deal with cancer cells or certain types of viruses and your body send your adaptive immune system to respond to different types of bacteria or a parasite. There will not necessarily be overlap, much less consistent results between an antibody based assessment and a non-antibody based assessment. That does not mean, for example, that the results are wrong.

I will give you an example here, I have done quite a bit of testing on myself -partly out of curiosity and partly out of really wanting to understand more through experience - and I have shown very persistent sensitivities to dairy and eggs for a very long time; so that was not a surprise in any way. I have also known that I have some real poignant inflammatory symptoms that are triggered by wheat and I have noticed that for many years and really done enough trial and error to know for sure that wheat is causing it.

But I had been perplexed by the fact that persistent IgG based tests - and that includes both IgG and IgG-4 - have failed to flag anything related to wheat. I knew from personal experience that I was having a reaction to it and it wasn't a gut reaction, it was a joint reaction so I knew that it was something systemic, something that was really happening in my immune system. One of the reasons that I pursued the ALCAT was to see what it might flag that the other test did not and this was indeed the place where gluten showed up as a reaction for me.

I just wanted to point this out because I had a mild reaction to gluten and a severe reaction to wheat. So in some ways this was cathartic because it was validating the experience that I had but I certainly knew from the most important point of view that counts - which is my personal experience - that I was definitely reacting to something and indeed this was validating for the inflammatory response. It can be a little confusing or a little, perhaps, overwhelming to think about "well, what kind of test should I pursue?"

I will tell you, for what it's worth - just for one data point - that in my own practice, the vast majority of the time I use IgG-4 testing unless I really think we need to cast a broader net or where clients simply can't afford or get access to that, they will pursue Total IgG testing. I only use ALCAT when I have a lack of answers; when we are not getting a full set of data. Where eliminating the IgGs is not getting at more than ¾ of their symptoms then we need to cast a broader net.

I also use ALCAT when people are really obese and it's really clear that a lot of their weight is inflammatory, what I call inflammatory weight, and we need to really understand what they may be
chronically eating in their diet that might be part of the problem. I have had good success actually; with obese patients eliminating their moderate to severe ALCAT foods in order to help with accelerate weight loss.

*Can you hear me now? Hello? Okay, good, sorry, I apologize, It seems like we lost sound for a little bit so let me just start again at the beginning of this page.*

Just to reiterate what I said earlier that the immune system is working as a big symphony so there is some interconnectedness that you need to understand. First of all that IgE reactions can create IgG ones just by virtue of the histamine release which creates inflammation and creates intestinal permeability.

Interestingly enough, a good reminder of the fact that in general the immune system's job - its chronic pursuit is tolerance - is the fact that when individuals are going through immunotherapy it's successfully lessening IgE allergies. They will often show an increase in IgG-4 antibodies of the same substance, which is actually a sign of success of the treatment because the body is learning to have a less violent, aggressive response to something. Keep in mind that may be the sign of improvement in some of your clients. This is a good reminder to take a look at the big picture.

Clients that are taking immunosuppressive drugs generally are going to have a suppressed ability to make antibodies - that's part of how they work. All steroidal anti-inflammatory drugs work the same way. If the drugs are being used temporarily, generally all of the laboratories recommend that you wait six full weeks after the steroids or the immunosuppressive drugs have been stopped before you do any testing.

If someone is on immunosuppressive drugs for the foreseeable future, because of say an auto immune disease, than one of the things that you can recommend they pursue with their doctor, in order to make sure that they have enough of the antibody response to make testing useful, is their doctor can actually measure in their blood their levels of total IgE and IgG.

Sometimes you'll find out that they are nice and healthy even in the upper half of the reference range, which is a sign that they are still hopping but in other cases you will see that the levels are really quite low and down in that bottom 20 or 25% in which case testing for sensitivities may not yield enough fruit. Or in those people you might test and you might come up with three or four mild reactions. If they are taking those drugs, those three or four mild reactions are probably very clinically useful. It's just that the overall level of amplification has been suppressed because of the drugs.

In terms of antibody testing it's really important to remember that people have to consume a food in order to develop antibodies against it. If someone has been eliminating gluten for six months and then they want to do a test to see what other sensitivities they have, you need to be ready to explain to them - when they say "oh my gosh I am not sensitive to wheat anymore!" - that it doesn't mean anything it all; it just means they haven't eaten it. If you haven't eaten it you can't develop antibodies to it.

Sometimes people will get an answer on a test where they are reacting to something that they will say "I have never eaten that before, ever". What it means is that food just looks enough like another food that they have eaten that the body is responding to the mimicry of that food. It is important to remember that
the IgG and IgG-4 testing can also be cross reactive and one of the most common ones I see is that Rag Weed molecularly looks similarly to things like watermelon, bananas and cucumbers.

In fact, I have a client where all three of these things showed up in the Spring. When we did sensitivity testing during the time of year when her seasonal allergies were all fired up her body was very reactive to molecularly similar foods. When you are testing clients who have really bad seasonal allergies and it’s the time of year when seasonal allergies are high, you really got to keep this in mind.

Generally, I try to avoid the prime seasonal allergen months for when their allergies tend to flair just so that, for the most part, they really focus on the remedies for helping them to feel better first but waiting till a time where it doesn't show up.

There was a question about “how much time before testing does one need to eat a specific food in order for an antibody to show up.” I think that’s widely disagreed. Generally speaking, two days should be enough because certainly, if you think about it, if you've eaten it and digested it and absorbed it within a few hours. The immune systems response, as I mentioned earlier, can technically take up to two days or maybe longer. Than the antibodies degrade, the half-life at the longest is 30 days.

Generally speaking, when people are preparing for tests I recommend that in the two weeks prior to the testing, they eat a nice rich varied diet. Now obviously, if they know they are sensitive to a food, I don't recommend that they eat it just for the sake of feeling bad so that the test can say "yup, you're right, you are sensitive to that". I try to be really smart about that.

If people already know or are highly suspicious that they are sensitive to something, I recommend that they continue to eliminate it. In the big scheme of things it's much better for us to help them as coaches to help them to find alternative foods that they love and just not go there. If they say "well you know, ⅓ of the time when I eat eggs, I get a stomach ache" I'm like "that's great, lets bet on eggs, let's just get rid of that. Let's find another food that you love; let's find a different breakfast food for you."

Where people really aren't sure, eating a nice rich varied diet in the couple of weeks before hand should, generally speaking, be a good period of time. IgG antibodies live in anywhere from just a few days to a month. Okay, let's see. I think the rest of these points I have mentioned already so I am going to keep going here in the interest of time and talk for just a few minutes about eliminations and reintroductions.

Now, because IgG antibodies do have a half life and they are not attaching themselves to any other part of the immune system, like IgE, and they have to be trigged by exposure then theoretically you can eliminate IgG sensitivities. Because the half-life is at most, like I said, about 30 days, generally speaking thinking about eliminating it for at least two months can be effective.

What I usually recommend is a three month elimination. The reason being is that it takes the average client at least two or three weeks in order to get their act together and really truly eliminate it. If you say to eliminate it for two months but it really took one month for them to get their act together and then they are really pushing you to help them reintroduce it at two months you really haven't given them much of a window.
So I recommend three months because I think that really helps to give folks a fair shot to then try to reintroduce food and see how their body responds. Keeping in mind that in order for the elimination to work it must be cold turkey, I use that phrase in my practice a lot because people think "well as long as I eliminate it 95% that’s got to be enough".

I find you have to be very clear with people: "cold turkey" meaning not even one bite. None. Zippo. Then coaching clients to be patient, depending on how true their elimination is or how persistent their inflammation is, it may take a week or it may take a month or more for clear benefits to appear. Make sure you set their expectation. I find their default is "hey if I eliminate these foods, I should feel better in two or three days".

If you know that intestinal permeability exists, you've got to address it or you have no hope of the food sensitivity going away because the same permeability that created it in the first place is going to create it again as soon as they add it back into their diet. Another reason I like to create this three month window is to allow plenty of time to allow for healing the gut lining. We talk about this extensively in other courses like Disease Begins in the Gut but I just want to give you some of the pearls here for things that can repair a permeable gut lining.

One of the most important things that I didn't list here is making sure that they have sufficient Vitamin D. One of the primary things that low Vitamin D will do is to help to create loose junctions in between the microvilli. The most important thing about an elimination is that it needs to be long enough and truly cold turkey. If someone trips over it, like "Oh my gosh I accidentally went to a party and before I knew it I was munching on some kind of cracker!" It's important to not freak them out but like "alright, that’s fine, let's just go immediately right back to 100% elimination".

It is the repeat exposure to an antigenic food that allows the complexes to build up, not the first one. So be careful about clients who will say "hey I accidentally had a bite of egg the other day and I felt fine so maybe I am not sensitive to it after all". It’s the repeat of exposures that will cause the flare up of inflammation. Hopefully if people have the hiccoughs it's not because of a binge but rather because they accidentally had a bite or two of something and they got right back on track.

Once they have done the three month elimination and they are ready to reintroduce, I recommend having a serving of the food - not a bite but a real serving - twice a day for three days in a row. With the goal being really to have enough that the immune system is not confused at all. It's basically kind of thumbing your nose in the immune system's face and your saying "Hey, if you don’t like it tell me now".

For example if we were reintroducing wheat I might say, "I would like you to have a piece of wheat toast twice a day for the next three days in a row. Pay careful attention to how you feel. What symptoms you notice" The inflammatory symptoms we talked about on the prior page, what kinds of things show up. Keep in mind that the symptom that they had initially may not be the symptom that they get upon reintroduction.

For example I have had people eliminate dairy because it gave them chronic post nasal drip and when they reintroduced it, it gave them eczema. Or I have had people eliminate wheat because of the brain fog and the depression type symptoms and when they reintroduced it, they got joint pain. It's very important
that when people reintroduce foods they do it at a time ideally when they are at home and focused and not distracted by other things and can really focus on being self aware.

It's important to only reintroduce one food at a time; it can be a nightmare if a client accidentally introduces two foods on top of each other because if it gets a reaction you have no idea what food caused it. I recommend picking one food perhaps the clients misses the most, doing the reintroduction, deciding whether it was positive or negative and then stopping that food again - taking it out of the picture.

Continuing with the prior elimination diet for a good three days and picking the second food and in that sense really only reintroducing one food a week; really trying to get through, say, a period of several foods before you decide what the main stay diet is going to become. It may take a little bit patience for the client to do this but I find it can really help you to be really fact based in how their body is responding.

Something that is really important that you talk to your clients about is withdrawal. As I mentioned earlier, substances that we have IgG antibodies to are often things that people crave. It's really interesting to see clients' reactions when you help them understand that substances in many popular foods, especially gluten and dairy, have molecular appendages that fit into endorphin receptors.

Remember endorphins? Those are the things that people get during Runner's High and that various types of drugs cause. This is what can make these food addictive and why people feel like they feel so good when they have them, or why they crave them. And so, as a result, when people initially begin an elimination of foods that they really relish, especially gluten and dairy, they can have some pretty significant withdrawal symptoms.

Please, please warn your clients of this. Let them know that there will be some cravings. That it may really stink, for the first week for so they are just going to have to plan to be distracted, that they have alternatives ready to go and just be prepared to power through it. This can particularly be a problem for children who, when they don't understand what's happening they can freak out a little bit.

Dr Bock, in his book, writes a bit about a young child, a three year old, who had a complete melt down panic attack in his office one time because his mom had been denying him his box of Wheat Thins, which was ubiquitous in his little curled arm, because he was completely getting high from the gluten in the crackers. It took the little boy well over two weeks to have essentially chemical detox from his little crackers.

The other thing that clients may be shocked at is that during the process of fully eliminating the food over multiple months, if they do get access to it they may be much more sensitive than they were before. The reason for that is, of course, that you've got circulating complexes and the body has antibodies in response to it and its making all of these antibody antigen complexes and then you start removing the food.

Then there is a period of time where there is excess antibody count because the body is still thinking "okay I am under attack, I have plenty of soldiers, where is the bad guys? Where is the wheat, I am ready" and of course the wheat has disappeared. So for a period of time the body is more sensitive to the
things that it eliminated. This is another reason why I emphasize to people that cold turkey is really critical.

That is why, if you end up with someone doing an elimination for a shorter period of time, like one month, when they reintroduce the food if the body doesn't like it the experience can be kind of scary. I can tell you, from my own personal experience, I have eliminated things that cause me headaches before, that when I reintroduced them gave me hives, which was pretty disconcerting. Clearly evidence that my immune system was not happy with that food in any way, shape or form.

So again, important to let people know that this type of thing can happen but it's toward the goal of helping to clear the sensitivity. So again, a reason why I think getting a client to commit to that three month window, at a minimum, is really critical.

Sometimes three months may not be enough, sometimes you're going reintroduce, maybe a client has four sensitivities and you reintroduce all four of them in turn and three of them appear just fine and so the client keeps eating them and that fourth one just keeps triggering a reaction. Sometimes a longer elimination is needed, sometimes 6 months, sometimes 9 months.

Occasionally you'll run into someone like me, who has a persistent IgG reaction where I have been eliminating the food for several years and it's just not happening. Every reintroduction and every test indicates that it's a problem. Thankfully, that is rare, I find in the vast majority of cases people are able to reintroduce and enjoy at least ¾ of what they had IgG sensitivities to, which is nice in terms of giving people dietary variety.

I am not going to spend too much time of this in the interest of our session length here but I did want to give you some data because you are undoubtedly going to encounter some of the controversy about food sensitivity testing. I love this quote by Dr. Cara Fitzgerald, I actually heard her say this: "There is a lot of debate and in some ways like most progress in most fields, especially in medicine, the evidence of debate is a sign of change."

I believe it's Gandhi who said: "First they ignore you, then they fight you like crazy, then they act like what you said is common knowledge." I think in a lot of cases of more alternative medical theories we are in that 'fight you like crazy part' of progress where there is a lot of controversy and a lot of back biting and debate in between the conventional and the progressive medical world.

The types of testing that I have shared with you are very widely used within the more alternative medical world. I have personally seen the results of these tests really change peoples' lives. I think that one of the reasons we see controversy, especially in the world of conventional allergists, is because in some cases there is a very narrow view that the only type of allergy immune responses that we have to food is IgE and histamine mediated and anything else is some other problem.

Well, okay. If you are evaluating it from that perspective then, yeah, IgG doesn’t seem like a valid response because you already have a limiting belief that it has to be histamine triggered. We also know that is not true in terms of what people actually experience. Because of these types of reactions, please, please, please, do not set up your clients by sending them to a conventional allergist or a very conventional physician to ask for food sensitivity testing.
They are not going to have it and you may set them up for a very controversial discussion. If they have already bought into the notion that they want to do the testing than the discussion is really going to create a lot of turmoil for them, which can just be painful for the client. It's one of the reasons, for specifically food sensitivity testing, I am very careful to send clients on a referral to a functional or integrative physician or a Nurse Practitioner for that testing. Or, if they wish, there are certainly resources for ordering these test kits online; there are several resources for doing that. For those of you in the semester program, we are going to talk about that in the “Labwork” course.

Another reason that there is some controversy about it is: in infants, high levels of IgG-4 are associated with the process of developing tolerance for food, which is very true. In the first few years of life is when we are trying to learn to distinguish friend from foe. It is when the immune system is developing and that’s why that type of testing is not appropriate for infants and usually not even necessary anyways because hopefully infants are being breastfed.

I have seen, unfortunately, a number practitioners who implement the IgG test results very inappropriately, in my opinion. Where a person may come up with one severe and, I don’t know, 15 different mild of very low sensitivities and they are convinced that they have to eliminate all of those foods for the rest of their life. I don’t think that’s clinically accurate, I also thinks it's really overwhelming for their patients.

So I think that sometimes there is a bad reputation for the testing because of how its implemented. I also wanted to give you a lot of data, or you might think of it as ammunition, because IgG sensitivities have been studied with the regard to the effectiveness of eliminating foods identified, specifically from testing, and their resultant symptomology improvement. I really wanted you to be aware of that.

I think a lot of conventional medicine struggles with these types of concepts because you have to eliminate what one unique person is sensitive to. If 10 different people follow the same elimination diet, depending on whether you hit their sensitivities or not it may or may not make a difference. If one of their major sources is also Candida yeast overgrowth in the gut than eliminating their foods may not reduce the inflammation enough to make a difference.

Maybe it is a key part of the equation, but like we talked about before, if I have three tacks stuck in my butt and I only remove one of them, is that part of healing? Yes, but do I feel better? No. It is important to understand that the way we approach conventional, kind of double blind, placebo control testing for these solutions is not very well suited for the multilayer dynamic that happens in inflammatory disease.

It does not make it wrong but it does make it an inappropriate way to test it in terms of validation. Regardless, we know that an exaggerated immune response is evidence of inflammation, regardless. Period. Regardless of what you call it or how it's validated or how it's tested for; it is still something that promotes disease in the body and needs to be addressed for people to find healing.

I am going to give everybody just a couple of minutes here - take a deep breath - going to grab a swig of water here. We are going to move into a more targeted manifestation of a toppy and primarily allergy, which is asthma. If you need to make a quick bathroom break, feel free to go do that right now.
Please do, I want to say this, keep the questions coming. Lots of wonderful questions and comments I have been able to seed into my comments as we move along - I appreciate you doing that - it really helps the material I hope to be more targeting.

Alright, so let's talk about asthma. Very briefly, when we talk about asthma we are talking about experienced dysfunction in the respiratory system. This is primarily the system that allows us to exchange carbon dioxide and oxygen with our environment. We have, as you can see, a lot of physiology in the respiratory system but inside the lungs we have these branches (called bronchials) that attach to little air sacks (called alveoli).

We have lots of these alveoli - and this is actually the site of diffusion in and out of the lungs. This is actually the surface of the alveoli is really the place where oxygen goes out into the body and carbon dioxide from outside diffuses back in for expelling back into the environment.

The diaphragm is involved as it contracts to pull oxygen to pull into the lungs and relaxes in order to allow carbon dioxide to leave. We cough, interestingly enough, as part of the non specific innate immune system, as a way of expelling foreign particles. Central to our discussion here is the fact that our breathing processes, like everything else in our body, is connected to the central nervous system.

We chatted in prior courses before about how mindful breathing techniques can stimulate the Vegas nerve which can alleviate anxiety and calm catecholamine or adrenalin response in the body and help to calm the sympathetic nervous system; another wonderful example of the interconnectedness of the body's systems. When we talk about asthma we are talking about those bronchials, or those branches, within the lungs becoming inflamed. As you can see here in the differences between these two diagrams that includes swollen walls of the bronchials; increased mucus production, which thickens the internal walls (the etyma of the bronchials); then tightened muscles that create contraction and spasm within those bronchials.

This is the anatomy of asthma that creates the symptoms that people experience. Just as an interesting side note: I want you to think about this picture, especially for those of you who are SAFM semester veterans who may have taken other courses, what does the inside of this bronchial look like. Where have you seen a picture like this before of swollen walls and increased gunk build up on the inside lining of things and tightened muscles, or spasming, creating a problem? Any ideas come to mind?

Yes, exactly, about six people have hit is right on the nose, right off the bat! This is what can happen in our cardio vascular system. This Is not just the anatomy of asthma this is the anatomy of inflammation in inside vessels! What you see in the bottom left hand corner is the anatomy of atherosclerosis - the swollen walls the increase gunk, in this case plaque rather than mucus (keeping in mind that they are both immune responses, both mucus and plaque are overwrought immune responses). And then the tight muscles - that can lead to symptoms like hypertension, heart palpations or tight muscles. Just an interesting side affect for the consistency of the anatomy of inflammation.

Asthma, from an experience perspective, is chronic inflammation in the airways. It usually results in intermittent experiences of shortness of breath, spasms, coughing, wheezing, basically airflow obstruction and the various symptoms that can be associated with that. It is usually diagnosed very
simply with spirometry equipment, which is measuring the volume of maximum air which can be inhaled and exhaled over a one or multi second period.

A bit like any other atopic disease, the incidence has increased exponentially in the past decade. In fact, you may or may not know, that it is the most common chronic disease among children in the western world. This is very relevant to our prior discussion up until this point in this course. The reason group these together for this course is because the most common trigger for asthma is allergens or sensitivities. It is those foreign substances that the immune system is reacting to.

There are other triggers that can exist that I am sure you have heard of; things like exercise, cold air, medications, or various chemical irritants. Theoretically asthma can be atopic or non-atopic, though I gave you a reference for this. It's really interesting and there is a lot of debate about the fact that atopic asthma may just be that we don't know what the allergen is yet. Theoretically the body can react to a number of different things as threatening enough to cause that type of reaction.

I am going to talk about the dynamics a bit more in just a moment. A little clinical tip I want to make sure you now of here: for your clients who have hypertension, if they also have asthma they should Not, Not, Not be taking beta blockers. This is something I find a few of clients' physicians have missed. Beta blockers are formally contra-indicated for people with asthma because beta blockers themselves can be a trigger for asthma.

A key concept, similar to a lot of inflammatory dynamics that we talked about is that the true root cause of the inflammation - that we just talked about, the swelling of the walls, the building up of junk - may be different from the actual trigger. As we talked about, an awful lot of the cause of the inflammation itself is often in the gut, it's often a chronic persistent exposure to things like allergens, infections or toxins. The actual trigger may be something more transient or something more immediate.

Someone can have chronic inflammation build up from an environmental sensitivity to mold and they manage to get a fungal infection in the airway and that makes their system more sensitive to food and dairy food ends up being a trigger for the actual asthma attack or overall inflammatory episode. There is a couple of layers here; obviously all of these are things we can help people with.

It is often a two stage type of event, where asthmatic clients have some ongoing background sources of inflammation all the time and then they're not having as asthma attach they think they are "okay" when in reality the precursors to the attack are just lying in wait, if you will, for a secondary trigger that makes them actually have the attack.

Conventionally asthma is treated with a wide variety of drugs. By far I find asthma, much more so than even a lot of other conventional treatments, is very medication oriented. Once again, the goal is to suppress the symptoms or suppress the immune system. Now, especially in the case of asthma, this can be life saving and it's really a blessing that we have these solutions but many of our clients are coming to us looking for support in order to make them less sensitive or to actually make the asthma go away.

I will completely reassure you that it's possible that their asthma can go away, as long as, once they find out what their sensitivities are they are willing to honor them. In the medication world I want you to at least be familiar with the different classes. Steroids, of course, suppress the immune system by putting
large amounts of glucocorticoids in the body. Those hormones suppress immune function so it's not really fixing anything, it's just suppressing what the immune system wants to do.

Antihistamines are working more locally in order to suppress histamine receptors in tissue so they don't respond in a life threatening way. Bronchodilators probably do what it sounds like they do which is to dilate the bronchials so that the airways are not as impinged. Then there are various medications, like Cromolyn Sodium, which can proactively impair the action of various immune cells, like mast cells.

Of course all of these medications are very vulnerable, or make the patients very vulnerable to having another immune system problem while they are treating their asthma. When you are suppressing your immune system you can, for example, make someone feel better while they have arthritis or while they have Crone's disease but in the process they may pick up pneumonia because the immune system was suppressed.

A couple of key pearls around the conventional treatments: Even short term use of steroid inhalers can create GI problems because the inhalers are used locally and mostly experienced in the airways themselves. They tend to be quite effective but can cause disease in that part of the body specifically thrush - which is Candida yeast infection of the mouth and the throat.

Sometimes the bronchodilators are taken in low doses in an ongoing basis. It is very important, kind of like the beta blocker comment I made earlier, it can actually be an increased risk of death if people are taking those if they are not taking a steroid medication along with them. Really important, if you clients have asthma, you may want to just mention to them that if they have prescriptions for both they really need to take both. Sometimes people don’t like the notion of taking steroids and so they may resist them but that is not safe because the medications work in synergy.

Of course part of the problem of ongoing use of steroids for any purpose is that they can suppress the systemic cortizol secretion. While the higher level of glucocorticoids in the airways can help to suppress the disease or asthma, but like a lot of other things that we might use, the body senses the presence of the external medication and suppresses its own support. So people can end up with things like low blood pressure, fatigue, impaired thyroid function, low stomach acid, and some other common effects of low adrenal output.

I want to spend a few minutes talking about expanding the gut connection that I introduced in our first webinar. If you want to help people with chronic inflammatory disease than I would offer to you that you need to become an expert in the topic of stomach acid. There is a book that I am going to recommend that you read - and actually it’s the first citation down at the bottom of this page, and it's listed on the More Information slide in the back of this presentation.

It’s a book written by Dr. Jonathan Wright called Why Stomach Acid is Good for You. It seems like such an innocuous thing, stomach acid, it's not even one of the fancier parts of our digestive juices, it's just hydrochloric acid. It's really important, I am amazed at how much of a lynch pin it is at connecting triggers to dysfunction and connecting the GI track to disease elsewhere in the body.

You might be surprised to learn that, depending on the study, nearly or just over 80% of asthmatics also have chronic acid reflux. If you take a look at the figure on the right hand side there, it's probably not a
surprise because keeping in mind that the airway and the food way have some shared physiology in there. When we look at the definition of reflux, which is the movement of stomach acid contents back up the esophagus, it's not hard to see that there might be an effect on the airway that is right next to it.

They are side by side running down our throat. Chronic acid reflux, and this course isn't really designed to get into this in detail; “The Disease Begins in the Gut 101” course gets into it in a tremendous amount of detail, and the book I just mentioned, chronic acid reflux is not caused by too much stomach acid, and we don't have time to get into the details of that, but it's just not.

Having too high a level of stomach acid is incredibly rare; its most often caused - when it does happen - by a duodenal ulcer or a couple of relatively rare diseases. The vast majority of acid reflux is actually caused by low stomach acid, magnesium deficiency, food sensitivity or allergy, hiatal hernia, medications - there is a real lengthy list of them, or an infection in the stomach by a bacteria called helicobacter pylori, or some combination of those things.

I find in my practice, there is a huge amount of the combination of food sensitivity plus slightly low stomach acid plus magnesium deficiency equals chronic acid reflux. As a result, that is fairly straight forward to support a client with. When we have suboptimal stomach acid, that has a medical diagnosis called hypochlorhydria. The presence of that, hypochlorhydria or suboptimal stomach acid, has actually been shown to increase the incidence of IgE allergic reactions by 10x.

And I wanted to spell that out - as in tenfold, not ten percent more but tenfold, as in increasing it by 1000%. Hypochlorhydria is much more common in asthmatics than in the general population. I hope you can start to see the data tree that we are building here. This has actually been studied - that 80% of asthmatic children have hypochlorhydria. And it actually has been shown that avoiding food allergens that are diagnosed and supporting children with supplemental stomach acid, hydrochloric betaine, yields significant clinical improvement in their asthma.

A few studies have looked at atopic children in general and the dynamic of having low stomach acid and intestinal permeability sets up the body for having mal-digested food more likely to get down into the immune system and predispose the child to an even more aggressive immune response. That is not hard to imagine, it's pretty easy to understand. Again, acid secretion return to normal for most, but not all, children who actually eliminated allergens and their sensitivities.

I am going to pull these pearls together for you in just a second but I wanted to give you references for some of these things because stomach acid is a key player in all of this. In adults, stomach acid production decays with age. Even the National Institute of Health believes that half of Americans, by their mid-sixties and well over 80% of people over 85 have insufficient stomach acid. I think this is part of what causes the elderly health to deteriorate rapidly once beyond a certain age. Certainly it can easily cause muscle wasting through the body eating muscle tissue in order to fuel critical functions when protein mal-digestion is chronic.

Another interesting connection, so let's go back to the asthmatics. Frequent use of bronchodilators weakens the lower esophageal sphincter. Also the diaphragmatic pressure so will predispose those, who already have asthma, to making sure that their reflux is chronic. As I mentioned earlier a key factor in
acid reflux is a magnesium deficiency, which we talked about in many, many courses as extremely common, when magnesium is low it promotes any type of spasm in the body, muscle spasm.

Well, acid reflux involves a spasming of that esophageal sphincter; asthma involves a spasming of the airways. We know that the presence of allergy itself can decrease stomach acid production and interestingly enough this is actually very well studied in children. Low stomach acid, one of the first nutrients that goes out the window is B12 because it requires strong stomach acid in order to be absorbed later on in the intestines. When you have low vitamin B12 it promotes wheezing. Wheezing can then trigger more acid reflux through compression of the lower esophageal sphincter.

Let me tie some of these things together. Allergy can promote low stomach acid, it has actually been shown that the presence of allergens chronically in the stomach actually does damage to the parietal cells in the stomach so that literally less stomach acid is produced. Low stomach acid can promote acid reflux, simply because of mal-digestion of food which builds up gas and blows open that esophageal sphincter.

Acid reflux can then promote asthma for a few different reasons. There are some really interesting citations about this. Its believed to be not just because acid can travel up and tiny bits can end up going down the airway and end up in the lungs but the presence of acid back-up in the esophagus, which isn't where it's supposed to be, is triggering the asthmatic spasm because of the nervous system. The Vegas and other related nerves are actually connecting the reflux to the asthma.

Low stomach acid can worsen allergic hypersensitivity, which, as you can see, can create this vicious circle. My assertion to you is that you are going to see this in your practice many times; maybe in a 10 year old, maybe in a 60 year old. There is definitely a huge connection here, and I am going to give you some tips in a little bit on the topic of stomach acid. There is a huge dynamic here in terms of the immune/gut/respiratory system connection; I think another just fascinating example of the interconnectedness in the body.

Now I am going to make it a little bit more complicated and I promise this is the last rosette icing on the cake, but I want to talk about the role of stress. One of the primary things that you will see in your clients with chronic adrenal fatigue is low stomach acid. We talked before about the adrenals - we have a whole course on adrenals - but we mentioned it in a few different course about how chronic mental, emotional, and/or physical stress can cause the levels of cortisol in the body to move from optimal states, which is what you see in this first diagram here…

Whoops, excuse me just a second here, I think my screen has frozen. Okay. Whoops...

So what you see in this first diagram here is a fairly typical diurnal curve of moderate cortisol. Well chronic stress can move us into this middle diagram where you end up with cortisol levels that are much, much higher - this is the highly elevated curve you see in the middle. The body can sustain that for a while but it's only intended to do it for short periods of time, after which the process of healing requires that the body gets a break, that we get rest, that we get relief, that we get respite.

Though, we know that when the body does not get respite eventually the adrenal gland can really wear out and simply get to the point of dysfunction where it can no longer put out adequate amounts of
cortisol and someone moves into a state of what we call adrenal fatigue, which is what you see in the right most diagram here with the suppressed diurnal curve which is suboptimal during the first half of the day. You can see all sorts of interesting test results - all four of these are salivary cortisol (saliva) tests.

Cortisol stimulates stomach acid secretion, so low cortisol very often means low stomach acid. Of course, when we have low stomach acid, which means we are more vulnerable to NEW allergens or sensitivities or more vulnerable to new gut infections from random microbes, we're making the adrenals more vulnerable to other challenges. This is how people can get into a vicious downward spiral that turns into this chronic set of inflammatory symptoms; people become more overweight, more tired, more in pain, more overweight, more tired, more in pain. Often our clients come to us after wrestling with this downward spiral for years and years.

I wanted to tie this back to a number of dynamics that you can help with because there are a lot of things that we can do to help these clients. We can absolutely help them to get rid of triggers and contributors. I try really hard to choose cartoons and diagrams that are free access and this one isn't- and I apologize to the Mom's Clean Air Force - but I thought that this cartoon was hysterical. It's terrible, whether you are 15 or 50 to live in an environment where you have to be afraid of every little thing you are being exposed to.

We can absolutely help our clients to reduce that back ground root cause list of inflammatory triggers, as well as that more immediate list of inflammatory triggers. I think at the top of the list, for me, for that is unknown food sensitivities or allergies; helping people find out what those are. When in doubt have them do a full elimination diet. If they won't do that at least have them eliminate gluten and dairy for a month and see how they feel. We are really trying to help them to get to the bottom of that.

Reducing toxic exposure or buildup, even simple things like getting away from processed foods and all of the chemical additives that they imply, non organic foods, genetically modified foods - talk about something the immune system sees and Stranger-Danger. Cross pollination between a food and bacteria? There is something that doesn’t exist in nature on its own. Personal hygiene products, I find that's the largest blind spot in all of my clients; they just don't know that the fantastic makeup or moisturizer or hairspray that they glop on every day is loaded with toxic chemicals. They just don't know that, it doesn’t occur to them; they think their skin is a non permeable barrier.

Low stomach acid, we just talked about; I am going to talk about repleting stomach acid in just a little bit. Poor eating hygiene: sometimes people have low stomach acid for digestion because they are eating while running down a hallway or trying to eat in a car in traffic. Anytime we eat, when our sympathetic nervous system is in charge - when we are under stress or even in a low level fight of flight mode - we don't digest food well, not a surprise.

We need to help people with eating hygiene: sitting down, eating mindfully and slowly, chewing food thoroughly. Gut microbial imbalances, we talked about that before - let's talk about the power of probiotics in a just a moment. Sometimes people do have GI dysfunction and we need to help people get to the bottom of that. We talked about some of the other triggers for acid reflux.
For a lot of people there is a big issue with the air quality in their homes especially during the winter time where we tend to have shut windows. People will only change the filters for the air intake on their air conditioning or heating system maybe once a year. If people are sensitive to atopy they need to be changing it once a month, they need to be using higher quality hepa-filters.

I am amazed at how often I find mold as a trigger or a background factor for the trigger of allergy or asthma in response to a whole bunch of other things. Especially people who live in tropical or humid climates; mold can be hiding behind pictures and underneath carpet and in the walls. Adrenal fatigue, obviously there is a tremendous amount we can do to help clients with stress management in terms of helping them to eat in a way that’s not so full of stimulants, that’s more full of more calming natural whole food.

Nutrient deficiencies - fatty acid imbalances, I am going to talk about in just a minute. Insomnia, there no better way to up-regulate your sympathetic nervous system than to be tired all the time; that definitely causes everything to become overwrought. There is a lot we can help these clients with in terms of reducing their experience of disease in their immune system.

I want to make some very particular recommendations: Probiotics are really powerful, astoundingly powerful, it's amazing to me. In fact I will give you one example. I have a client right now who has experienced 100% remission from both her asthma and her seasonal allergies and her acid reflux as long as she is taking probiotics, as long as she is eliminating 100% of dairy foods, as long as she is not drinking alcohol and as long as she is taking 1000 mg of Quercetin twice a day.

She was doing great for well over two months. Three weeks ago, unbeknownst to her, she forgot to reorder probiotics and it kind of just slipped out of her supplement regiment. Within 12 days all of her symptoms came back; a really amazing example of the power of probiotics to rebalance the immune system, and to create that better balance between TH-1 and TH-2.

There are a number of species that will contribute to that; *Lactobacillus rhamnosus* and *saccharomyces boulardii* are two species in particular that have been demonstrated to be quite effective at that, and I use them quite a bit. The MetaGenix “Ultra Flora” acute care that you see in the upper right hand corner includes both of those along with some bifido; it's one of my favorite probiotics. Probiotics used during pregnancy and breastfeeding have been shown to reduce the incidence of atopy.

Infant intake of specific probiotic strains reduces the incidence of both eczema and dermatitis. What it's doing it helping to calm the immune system by the presence of, particularly, anti-inflammatory microbes. That’s all, it's not rocket science, it makes perfect sense! It's not important that the species colonize; they can just pass through and be calming while they pass through.

A key clinical tip for you is that if you have a client who has asthma, do not recommend for them a probiotic that includes streptococcus species because generally that has been shown to actually contribute to inflammation in those clients. I have given you references on all of these different studies so you can you at them.

There are a couple of questions here: to be honest with you I don't remember the strains off the top of my head but the references will be good for you, they do list them specifically.
Quercetin, which I mentioned earlier, is something you want to know about and is the top supplement I recommend for clients who wrestle with allergy and asthma because Quercetin is a natural antihistamine. I have used in order to help clients who wanted to get off of prescription or over the counter antihistamine drugs for a long time because Quercetin does not make you tired and the vast majority of antihistamine medications do.

Feeling like you want to take a nap or falling asleep at your desk is a big price to pay for getting relief from your nasal congestion. I think Quercetin is quite safe to use; it works just like any antihistamine medications. For my clients who are going through seasonal allergies or chronic severe allergies I usually recommend a 1000 mg a couple times a day. Occasionally during really, really bad days of a season they may need three doses but I find for the most part 1000 mg twice a day works quite well.

For people who are more just dealing with occasional exposure to allergens, maybe on more an ongoing basis, I find maybe 500 mg a couple of times a day works quite fine. I gave you some references for some data about other things that Quercetin does; it’s also quite anti inflammatory. I do recommend choosing a formula that includes another great anti-inflammatory called Bromelain, which is an extract from pineapples. In this case Bromelain helps with absorption of Quercetin; Bromelain is actually an enzyme. You do have to take it on an empty stomach in order to get that effect. Both brands that I show you up in the upper right hand corner are blends.

The only real contraindication I would make for Quercetin  is while one is taking antibiotics. What I might add to that, but I don't think we encounter it very often is if you have a client who has kidney disease, there is some data, it's not highly consistent but, there is some data showing that people with advanced kidney dysfunction can struggle with Quercetin metabolism and secretion if people are taking too much.

In those much higher doses for people with kidney problems you may want to think about using lower levels or at least making sure they are in a place with good kidney function in order to attempt that, not a typical contraindication we run into. I use Quercetin a very large amount in my practice and, as I have said, I have used it successfully in many cases to help clients to come off of the medications that they don't want to be on.

Boswellia - frankincense, the old biblical gift. Frankincense is a tree and there is a natural phytonutrient in it called terpenoids which include a substance called boswellic acids or what we would call Boswellia, which inhibits the leukotriene formation that is part of what the mass cells are triggering. It has been clinically studied quite a bit and has been shown to be very effective in reducing asthma symptoms in nearly ¾ of those studied at a dose of about 300 mg three times a day.

I actually use it as an excellent alternative to NSAIDs like Advil and Aleve and Motrin, especially in my clients that have arthritis. The Thorne product there is actually Phytoprofen, a blend of Boswellia and Curcumin and Bromelain. I like the name; it's like a play on Ibuprofen, instead it’s Phytoprofen. It’s a nice non-toxic alternative and of course it's going to do away with the terrible side effect of NSAIDs which is casing intestinal permeability.
Essential Fatty Acids. We talked about this in other courses before, it's very important to help our clients understand that a balance of Omega-3 and Omega-6 essential fats is really critical for allowing our body to have appropriate inflammation. Of course, the average westerner struggles with way too high a ratio of Omega-6 to Omega-3. An essential fatty acid deficiency or imbalance can absolutely contribute directly to all atopy including asthma and allergy because it takes away from the body's natural anti-inflammatory regulation system; so inflammation is more likely to run out of control.

When there is a clear imbalance in this I really like to encourage people to address things long term wherever possible with food. When people are really suffering, I do like to use supplements first because my priority is to help get clients relief fast. That’s also a big part of what helps them to be wildly satisfied clients. Once they have relief that’s when they can begin to explore whether they are willing or able to change their diet enough to get what they need from their food. It's really important, as we've discussed many times, to help people to feel better quickly because that is what helps them to keep confidence in this entire journey: working with a health coach; also keeping their belief in you as a high potential, high impact health coach.

I have given you quite a bit of notes here on Omega-3s as a supplement. For my clients, who are in this kind of chronic inflamed state, especially with allergy or asthma, I recommend at least 3000 mg of actual Omega-3. Typically 1500 mg twice a day with food; realizing that depending on the brand that you are using, that may be two capsules twice a day or if they get a really cheap brand it may mean eight or ten capsules twice a day.

It's very important to educate your clients on how to read labels to find out how much actual Omega-3s are in a supplement verses what's quoted on the front, where it just says fish oil. A lot of Omega-3 supplements are highly diluted and, even though it says 1000 mg of fish oil, in some brands ¾ of that is Omega-3 which is high intensity. In other brands only 5 of 10% of that is Omega-3. That’s part of how companies make their brand look like a 'better deal' or a real bargain because they have diluted their product.

Along with that, I often recommend an essential Omega-6 fat that actually ends up having anti-inflammatory affects; that is DGLA and is an essential Omega-6. We talked before about arachidonic acid and how that’s part of how Omega-6 create inflammation. DGLA is often deficient in people in a chronic inflamed state because the body is prioritizing the Omega-6 pathway that makes arachidonic acid. When you counter it with DGLA it actually blocks the inflammatory byproducts and it has an anti inflammatory affect. Two of the most readily available sources of DGLA are borage or evening primrose oil, and for these types of clients I usually recommend 500 mg a couple times a day.

When people start supplementing with essential fats the affects begin right away but it can take several weeks for people to see the affects. Again, setting client expectations appropriately is extremely critical for helping them to be wildly satisfied. Don’t tell them that they are going to be better in 3 or 4 days unless you are really sure that is going to happen. Even when I think it's going to take two weeks I tell them it might take up to a whole month and then if they feel better sooner they are delighted! Expectations have a lot to do with ultimate satisfaction. So it's important that we to help folks to understand that some of these remedies that are getting at the root cause of the problem are just going to take a little while.
Vitamin D, as we talked about before, really critical for strengthening the immune system; up regulating, among other things, our level natural killer cells, our level of balancing T-cells but also really important for keeping those tight junctions in the intestinal villi. It's really critical that clients have sufficient Vitamin D, which for me for clients is at least 50 nano grams per ml.

There is a lot of material here that a lot of you have seen a few times before but for those of you for whom it might be new I want to make sure you have plenty of back up with which to asses Vitamin D and to think about how to recommend vitamin D supplementation. Keep in mind that for clients with asthma in particular that both vitamin D and magnesium may be helpful and that taking high amounts of vitamin D if necessary to bring them up to sufficiency is going to deplete their magnesium. It's really important for you to make sure that they have plenty of magnesium in order to balance that.

And certainly on that topic, magnesium is really critical for many of the relaxation responses in the body. Anything that you can think of that might be tight or spasming probably needs help with magnesium. For our discussion today in particular, asthma and also acid reflux are things that usually need some magnesium support.

I often recommend that my clients visit their physician and check in to getting a red blood cell level of magnesium, as being the most accurate way to assess what their diet or supplement regiment is or isn't giving them in terms of sufficiency. Interestingly enough, even the FDA has out formal warning that individuals who are taking acid suppressing medication: PPIs like Prilosec and Nexium, that they are very likely to have magnesium deficiency.

That becomes a viscous cycle because obviously you need sufficient amounts of magnesium in order to help curb acid reflux and the primary remedy given to at least westerners in the conventional medical word for acid reflux is acid suppressing medication, which is covered in detail in the Gut 101 course. Again, the vast majority of acid reflux does not go hand in hand with high stomach acid or excessive stomach acid; it's just that the acid is in the wrong place so it hurts.

The PPI drug is simply making the stomach juices less acidic so then they burble up into the esophagus they don't hurt as much but it's not fixing the root cause of the problem at all. I have certainly worked with a lot of clients over the years who really wanted to be off of those drugs. The book I mentioned earlier to you by Dr. Jonathan Wright will really help to educate you about that.

I give you some different forms of magnesium to consider and does based on particular symptoms but very important to consider magnesium especially in asthma. I want talk for just a minute about supporting low stomach acid. This topic is treated in great detail in the “Disease Begins in the Gut 101” course but I did want to give you some information about common symptoms of low stomach acid.

If it's just a little sub optimal these symptoms may not be very strong but keeping in mind what we talked about so far, you are going to see it quite a bit in your clients who have chronic allergy and/or asthma. Of course what we really want to do it get to the heart of why this person has low stomach acid and really help them to make it go away.

That’s ultimately what we want to be able to do. In particular while they are suffering, while they have the disease process and, in particular, if they happen to be a senior then they may just be struggling for
the foreseeable future with low stomach acid and the best that we can do is to support them in replacing it in order to improve their food digestion and try to interfere with the downward spiral of the disease process that they are experiencing.

There are a couple of ways you can do this; one is kind of old fashioned and then the other one is a bit new fangled. A lot of health coaches prefer to use apple cider vinegar for this purpose; obviously apple cider vinegar is very acidic and very natural. You can put a couple of tea spoons in just a little bit of water and have a client sip on it in the middle of a meal. If they feel good doing that then ten to one they need that acidity.

A very important concept for you to realize is the last point on this slide: if a client actually has too much stomach acid whether it's because of what they are producing or what they are supplementing with, generally what they are going to experience is not acid reflux what they are going to experience is an uncomfortably warm acidy sensation in the center of their chest. Or sometimes what they experience is very loose stools.

Generally there is that very warm sensation that they are going to feel, which is literally the reaction of too much acid. It's not dangerous to feel a few times just in the sense of having a trial of additional acidity. You can use apple cider vinegar for that or you can use a supplement of hydrochloric betaine, which is just a salt of hydrochloric acid. The products are usually called Betaine HCl, like you see in the upper right hand corner, or sometimes you'll see it called HCl with pepsin. Another brand is Solaray, which is something I recommend often.

I like the capsulated form of hydrochloric betaine, even though it is a supplement because if a client has any erosion in their esophagus, which a lot of people with chronic acid reflux do, then it's not very safe on an ongoing basis to have them drinking something hyper-acidic like vinegar. They shouldn’t be drinking things like coffee or coke either but in the sense of helping them with something that they can healthily sustain; they can certainly experiment with the capsules of hydrochloric betaine and see how well it is tolerated.

Again, generally if there is no affect noticed overall it is generally recommended that it be sustained because if the stomach is accepting it generally it needs the support. I have included a handout for this particular course on the webpage that gives quite a bit of notes on the affects of low stomach acid and how to supplement or experiment with hydrochloric betaine, it’s a handout that will be informational to you but very useful for giving to clients as well. Just something to be aware of that this may be an issue; if you have clients who have atopy who also have some of these GI symptoms, you definitely want to explore it.

I always get questions, as I am right now, about testing for low stomach acid. Unfortunately, there is only one really good, conclusive test which to this day unfortunately remains relatively rare to get, especially from conventional docs, and pretty expensive, which is a Heidelberg pH Capsule Test. Which is something actually gets swallowed that measures the pH of stomach contents over a period of days. That is certainly very conclusive and very accurate.
Other things that can be looked at I have listed here; I won't go through all of them. Some of them are not going to make sense to you if you are a beginner here in the SAFM course world or relatively new to lab work. For some of you who are more advanced these will all make sense. That’s fine; I am just giving you all an opportunity to take some pearls.

Sometimes we can know that stomach acid is low just because the key thinks that stomach acid should be doing are not happening. You see it in the nutritional work where things like ferritin, the body's iron stores, are low; or serum B12 is low; or total protein is low. Again, they may or may not be clinically low, they may be just suboptimal. These are some kinds of things you can look at. Fasting gastrin is a marker some physicians are willing to run in blood, which is a marker of gastrin (a hormone that promotes higher stomach acid levels). If the body has been keeping levels really high it’s usually a sign that the body is wanting more acid and it can't make it.

Keep in mind that if your client is taking proton pump inhibitor medications than their stomach acid specifically is being suppressed so none of these tests are really going to be useful. If your client has been taking proton pump inhibitors for longer than three months it's safe to assume low stomach acid. If you are interested I have actually a number of different articles on my client website, which is EatOnPurpose.com, that talk about acid reflux. You are more than welcome to go to my site and poach those articles and use them for your own client materials. Whether it's for online systems or your own client handouts, there is a lot of verbiage there for helping clients to understand what's going on with acid reflux.

Alright, let's see. There were a couple of other questions that came up here.

“Are there any other herbal products besides Quercetin?” Sure, I can definitely mention a couple of other herbal products that are antihistamine related. Occasionally Quercetin doesn’t work or people find that Quercetin just isn't enough and they need to add other remedies. Stinging Nettle is also a good antihistamine; I usually use 1 g twice a day as an additional antihistamine. Butterbur is another good herbal remedy for allergy in particular but also for asthma; 100 mg two or three times a day would be appropriate.

A collection of these things, a combination of them is really quite safe to use for people who are really wrestling with allergy. It's interesting, I have had clients who simply eliminate all their food sensitivities and boost their anti-inflammatory and their allergies go away. I have had clients who did a two week toxin cleanse with me and the following season they didn't have allergies. A huge number of things that we can do to address that list of root causes that I mentioned earlier to ultimately make a difference.

I hope this course has really helped you to understand the amazing intricacy and wisdom of our immune system but also how so much of what we do now, day over day, especially in the Western world, is creating imbalance in the immune system. That the immune system is the home of the inflammatory surge or lack thereof. So it's really the immune system that we have to appease, if you will, and convince to have appropriate tolerance and therefore only appropriate inflammation. This is really going to help all of the other body systems to work properly and to keep our clients feeling fantastic.
Some real key pearls here that, as I said earlier, I think apply perhaps more universally that any of our clinical courses to a wide base of our clients.

So as always on this slide I have given you a few other links for more information including a couple of the books I highly recommended, especially the one by Kenny Bock and the one by Dr. Jonathan Wright - really excellent reads.

I thank you for your participation. As always your questions are more than welcome using the Q&A tool on the course page for Understanding Allergy and Asthma and the archives for this course will be available by mid morning tomorrow for your to review as many times as you wish.

If you haven't checked the site since the last course you may be surprised at just how many handouts are now posted that I have been putting up over the past couple weeks. Be sure to check those out; some are more clinical and for you and are more informational and other ones are designed to be used right away as client tools in your own practice.

Thank you all very much, I appreciate your participation and I will see you on the Q&A boards; take care, bye-bye.

END OF AUDIO