

Welcome to Module 7, The Art of Fundamental Care. In Lesson 1, we're going to talk about creating conditions for change. So I want to start with pathophysiology. Now that sounds like a gigantic topic, a big science, that we could spend hours and hours involved in. But I want to highlight one thing about pathophysiology that stands out with the work that we do. So pathophysiology is actually bridging the gap between scientific reasoning and clinical reasoning. So we can put those two together.

And we are looking at our clients from both the clinical aspect, but also the scientific reasoning aspect. That's what we do. We think about the data points and the steps that it will take to discover why they may not be healing. Pathophysiology is a convergence of pathology and physiology. So, pathology describes the conditions during the diseased state, whereas physiology is the discipline that describes mechanisms operating within an organism. Pathology describes the abnormal condition, but how did it get that way? So pathophysiology seeks to explain the physiological processes by which such conditions develop and progress.

In other words, pathophysiology defines the functional changes associated resulting from disease or injury. All right, lots of big talk, but what it comes down to is organisms behave differently in a state of health and in a state of disease. Disease is a life of an organism under abnormal conditions. So a dysfunctional cell is not the same as a normal cell. We can't look at a dysfunctional cell and expect it to act like a normal cell. Disease cells, they have to be understood.

So we must find what's being held back from them. What is it that they need to function and why are they not getting it? Now, a truth in all of this is that all disease begins at the cellular level. And the question then becomes, what does every cell need in order to be healthy? What are its basic needs. Hydration, nutrients, and a functioning membrane, these three things. So approaching all high-level dysfunction, and we've talked about such as retroviruses in autoimmune conditions and multiple sclerosis, they fail because we're not addressing the needs of the cell.

We do not know the reactions that the body will exhibit in disease when pressed with support. Now what does that mean? Well, I mean, we can give a client five different supplements and in a true chronic disease state because of the loss of function or the dysfunction in the cell, they may not react appropriately. They may not react or incorporate that supplement the way a healthy, normal cell will. So this changes the picture completely for us. A good health is built on a foundation.

It doesn't just happen. And many times it's hard to see through all of the symptoms that a client might be experiencing in order to understand what may not be functioning at a fundamental or a base level. So coming back to this creating conditions for change, what does that mean? Well, it means providing an optimum environment for change to happen. So how can we relate that to something in our everyday lives? Well, I'm going to use a garden.

When you plant a garden, you don't just grab a shovel and go dig up your yard and throw a few plants in and expect them to grow and or produce anything. You take the time to work the soil and condition it with everything that you know the plant is going to need in order to grow. We are doing the same thing. We are creating these same conditions in the body to allow it to heal. There is a caveat to this. We can only have the success that the body will allow and what the body can overcome. There are certain things that may be going on in the lives of our clients that we have no control over and that the body just cannot overcome it.

Now, what would these things be? Well, first, I often think of a hiatal hernia. So a hiatal hernia is where the stomach protrudes up through the diaphragm by a small amount. And the top of the stomach that is protruding through is tightly bound by that diaphragm so that food coming into the stomach doesn't have the full open stomach to which then gastric acids can be produced and the food starting digestion. So in this case, the food is at the top above the herniation and all of the

gastric acid that comes out is now right up next to the lower esophageal sphincter.

This is bad news. Over time, if the acid is not controlled, the cells can physically change. This is what we call Barrett syndrome. You might want to research that. But this is also why, in a hiatal hernia situation that doctors prescribe PPIs. This doesn't mean that that particular stomach pouch has too much acid. It means that there is too much acid coming out in a tiny little bulb of stomach and it needs to be calmed down there so that the cells do not over time change into pre-cancerous cells.

Getting past a hiatal hernia is difficult. This is a structural issue that can impact the ability for your client to heal. Being on PPIs for life, even without a hiatal hernia, maybe it's due to an inflammation problem or ulcerative colitis. A person who has been instructed to and will stay on PPIs for life. It will be impossible to find the conditions for change, the conditions for healing that might exist. Drugs that deplete nutrients. Well, we might be able to supply nutrients to that person, but we don't know how well they'll be absorbed or how they're going to be affected by the drug.

It's very hard to work around that. If the gallbladder is missing, this is a situation that has to be addressed because if bile is not coming out doing its job, then it just opens the way for downstream issues to happen in so many different functions of the body. So in this case, ox bile might have to be continuously used for proper bile action. a very small list of what we normally see with clients. Poor diet, poor digestion, poor hydration. Those are three very, very common things that I see included in every single case that I take on. So what are some of the common symptoms that we might see with a client? So, they come to us and they fill out our symptom report and we might see things like low nutrient levels on their lab work, we could see fatigue, we could see burping, gas, bloating, maybe they have constipation, maybe they have sleep deprivation, they're not sleeping well, maybe they feel dehydrated, maybe they have headaches, poor mood, cognition, brain fog, fear, tension, anxiety.

I've heard those a lot of times. Maybe they complain about allergies or craving sweets. What if their lab work indicates to you that they have insulin resistance? Or maybe they come to you with a diagnosis already of diabetes or high blood pressure. Well, these are a lot of very common symptoms. Being common doesn't make them normal, but they are common symptoms. So what can we relate them back to?

Well, we relate them back to the three things we just mentioned that we see in most clients. Although I would dare to say all clients. And that is poor diet, we're looking at low nutrient levels, fatigue, poor health, increasing dysfunction. We must use food to support the body. In poor digestion, we see burping, fullness, gas, bloating, elimination issues. And in dehydration, we're looking at, potentially on a lab test, elevation in hemoglobin and hematocrit, but they're not always going to be there, especially if this is a picture of some sort of anemia. So chronic dehydration affects anyone who either doesn't take in enough liquids or they can't retain them. Most of the water that's in the body is found inside of the cell.

But if the body is to actually keep and utilize this intracellular water, then certain conditions must be in place. You have to have a sufficient amount of minerals and salt. The cell must be able to produce enough energy to allow the regulation of the right amount of intracellular water. We need adequate amounts of amino acids and proteins. Let's stop right there because we already mentioned poor diet and then poor digestion. So where are we going to get these amino acids and proteins from? We need it for the cell in order for the cell to build and maintain mechanisms that control hydration. Now it's sounding like a very vicious cycle.

The organism must have all of the micronutrients that it needs to maintain this biochemical balance that we know is called homeostasis. So, you can drink water all day long. If the requirements of the

needs of the cell aren't met, you can just worsen hydration and create dehydration even more so because of diuresis which is just the increase of urine. So the body's producing more urine. And now what happens? Oh well we've got a ton more things it's losing all the vital minerals and the micronutrients and now we lost what the cell needs and we're going to not retain water at all. Sleep deprivation. So going to bed mildly dehydrated can disrupt sleep but even if you start off very well hydrated you're going to lose body fluid simply by breathing and that's normal. It can be worse though if you are a mouth breather or you snore or you have sleep apnea.

Dehydration, as I have researched, and I find this more and more interesting as we continue through, it is showing to be the most common reason for chronic fatigue. I want you to think about this because we've talked about dehydration so many times and more and more information just keeps coming out about this because it is one of these primary things that the cell needs to live and to function. So it must have nutrients, it must have a nice beautiful working membrane. So if dehydration is the most common reason for chronic fatigue, then it's also the primary reason why metabolism fails. So when our tissues are dehydrated, that means our cells are dehydrated and that causes a reduction in enzyme activity. So we can slow down the energy production by up to 30 or 40 percent just from the onset of minimal dehydration. One thing that I found in my research was looking at this from a psychological aspect. Dehydration can manifest itself in the form of a severe lack of interest in daily activities. Think about how the cells are being affected and utilized in the brain.

And in a dehydrated state, no nutrients are coming in and out. No amino acids are doing what they need to do and acting in the form of a substrate for those neurotransmitters. So there is a lot at play here. Constipation, we hear about that all the time. Drink more water if you're constipated. The large intestine is able to pull water from, or the body pulls water from the large intestine and that's what leaves our stool. But when the body is dehydrated, it needs to conserve and find and use all of the liquid that it can. So it's going to pull as much as possible, which is more than it should, from the large intestine. And it's going to leave very concentrated hard stool in its place. Now when we have this what do we have? We have a lack of the body's ability to get rid of toxins. Everything affects everything. In insulin resistance.

We can also see the commonality of low sodium or low salt diets, or even just very clean diets where the person is not consuming a lot of salt or electrolytes being associated with an elevated LDL and triglycerides. So when you restrict salt, your body eventually will start to increase insulin to help the kidneys retain more sodium. Over time, this can lead to chronically high insulin levels. It can also lead to a craving for sugar and possibly even refined carbohydrates. Maybe now there's weight gain and here comes more insulin resistance and then diabetes. So the circle where we want to inject ourselves into that circle starts at a very common and basic place and that's hydration.

So what's actually happening when we heal? There are a lot of practitioners that I talk to on a daily basis that use a large variety of supplements because they believe that the supplements are healing the body needs to heal. Now we just finished talking about the basic pieces of what the body needs to function properly, what that cell needs to function properly. So let's examine HCL. supplement, HDL and pepsin. Now on its own, it's only imitating, but enhancing the action of existing stomach acid. Stomach acid, one of the functions of the body, it allows functions within the body to work. And all of these other functions depend upon the action of stomach acid for everything to work in a proper way. Now taking supplemental HCL, it doesn't cure, it doesn't heal. All it's doing is supporting the function that's already in place by the body.

This is already the way the body works. Stomach acid in the stomach pouch is what I consider one of the most critical upstream features of function and it has huge ramifications downstream if it's not in place. Nutrient deficiency leading to poor nutrient absorption or a loss of substrates for neurotransmitters, overgrowth of bacteria, constipation, weak or brittle cell membranes, poor

migrating motor complex, so your food is not moving along through the small intestine, poor pathogen control, I mean the list just it goes on and on. One small thing like stomach acid has this much healing power over the whole body and yet many throw it around without any consideration, especially when we look at overuse of PPIs. Now do you see based on this list of symptoms how we might eliminate the need for so many other supplements if we can support stomach acid properly? So we're coming back to how do we make sure that the need of each of the cells is fulfilled in order to allow healing to happen. Again, we have to look at what are we doing to create the conditions for change. So diet, hydration, digestion, and assimilation will allow the cells to function.

It will allow methylation to function, the liver to function, bile to function, hormones and neurotransmitters to get the substrate that they need to function. These basics are the very essence of the healing environment. If the cell membranes have lost function and nutrients aren't coming in or out, how in the world is someone supposed to methylate? How are they supposed to detox and excrete toxins and hormones? If you understand the process and the needs of each, you will understand that there are no gray areas here. When we start on Lyme disease or hormone imbalance, we're starting right in the middle of the puzzle. Instead, we need a place to begin. We can't make any entrance or headway into these middle positions unless we start with all of the supporting actors that come before them.

We can't look at autoimmune disease without understanding the capability and the function and the health of the gut. We can't enter into a place of poor function without understanding the nutrients that support that function and why there may be an insufficiency of those nutrients. Now we can't begin at a place that doesn't include understanding the function of the cells. So in this way, placing our steps right at the beginning of the process, we are aligning to how the body itself functions and giving proper support to the priorities that exist in the beginning of the process.

Now having this data in place, it guides us to understand the outcome and then the needed support. Now I really want to be clear on this point. I really want to drive this one home. Being hydrated, having solid nutrient levels and good elimination on their own are not going to bring such changes as to heal all dysfunction in the body. We obviously need to do more. But the strongest point here is without these things in place we have completely eliminated the capability of healing. Now it doesn't exist. This is called the priority of cellular function where we remove, replace, and rebalance things that are happening in the body. This is why we have to understand the difference between working with cells that are not functioning properly, and those that are healthy cells in a healthy person.

Now let's talk about the priority of cellular function. And I want to bring up a term that may be new to you, and it's called heuristic. Heuristic is a rule of thumb. It's derived from a Greek word. It means to discover. And heuristic describes a method that might come from experience and it helps you think through things, which is what we're doing, what we're practicing. It's very similar, it would use the process of elimination or the process of trial and error. But the other thing that heuristic means is enabling a person to discover or learn something for themselves. So this is not only what we're doing with our clients, we are discovering, we're learning something new about them, but at the same time, we're teaching them, as we're learning, we're teaching them to make these same discoveries.

This is the only way that they will know how to take care of their health. So using heuristics, it involves an approach of learning and discovery to reach a solution. And this is what sets it apart from all other explanations. We are trying to reach a solution, but it might not be the perfect solution. So we might not ever realize the heart of the true dysfunction of what's happening on a biological or physiological level. But what we can do is we can group symptoms and we can arrive at a solution based on common sense. Heuristics are used for finding this approximate solution when we don't have the method or the means to find the exact solution. We know how brilliant and beautiful the body is, but there are so many things to discover about it.

And we could never know if one tiny dysfunction was causing an adaptation in the body or to present a certain way. And yet, from the simplistic view, the body is always looking for workarounds, and we can support it to use its resources where it's needed so that symptoms can be eliminated through some of these simple workarounds that the body is trying to find. Now, if we knew the why behind something imbalanced. We might assume that we could just easily work to bring balance back to this area, but we don't always have this exact information. Some of it is very clinical and it's very deep.

So we're only using symptoms as clues. Now, here's an example. High estrogen. Now there can be many reasons for why estrogen goes high. And one or more of those reasons will actually answer the question of why this individual has this elevation. So what if we determine that it could be inflammation driving up estrogen? We're looking at the lab work. We know that the estrogen is high, but we also know that this person has many areas of inflammation in their body. So now we are working to discover. We're coming back to that heuristic. We're using an approach of learning discovery and common sense.

All right, so let's go ahead and base that on inflammation. Then we start to seek out the origin of this inflammation. And what if we discover through the client's symptoms, through the lab work, that maybe there is an infection or maybe there is an autoimmune condition. And replacing cellular needs just because of that is not going to be successful. Now we don't have an exact solution. We only have an evaluation. We have to rely on the client giving us data to continue to lead us in the right direction. The steps that we take are to the benefit of reducing the inflammation that we see. Does it reduce the estrogen? That's a future step.

We can never say for sure. But we still know that inflammation has to be addressed first because of all its properties that can affect cellular function. Getting a handle on where the inflammation is and calming it down, maybe through gut healing, maybe to calm down the autoimmune condition, may lead us in the right path to this estrogen elevation. We do not have exact knowledge and steps. That's what makes this a heuristic approach. When we think about the heuristic approach and the priority of cellular function, we also have to mention allostatic load. The body was designed to handle intermittent stress responses, that is its dynamic, that is that seesaw. These stress responses pulse with the dynamics of the body. This is much different than what we see in chronic stress situations that constantly activate the HPA. So, the term allostatic load is used to refer to the price that the body pays for being forced to adapt to the changes that happen during these prolonged stress responses.

Allostatic load, the price the body pays, again, depletes the metabolic reserve in nearly every cell in the body. Okay, so the body must divert and restructure its resources. This is changing metabolic function to allow for the best chance of survival right now. That's all the body knows right now. What do I need to do to adjust and adapt to survive right now? The body only sees this need to prioritize the immediate need for survival without considering long-term health.