

Leading an Anti-Inflammatory Lifestyle

Welcome to Leading an Anti-Inflammatory Lifestyle. My name is Melanie Ordonez and I am one of your Moderators today. I am pleased to introduce our guest speaker, Dr. Steven Pratt. Dr. Pratt has vast experience with many different health and Behavioral Health organizations in the state of Minnesota, including serving as the executive Medical Director for Behavioral Health of the Minnesota Department of Human Services. Dr. Pratt has been a Senior Medical Director with Magellan healthcare since 2017.

He has been instrumental in moving the organization toward a more collectively approach to working with providers. He has overseen the development, immigration and operation of the Magellan Center of Excellence for treatment of substance use disorders.

Dr. Pratt is adept at leading organization change, engaging individuals who are not engaging in change effort, and holding all, including himself, accountable to the highest standards of performance.

Welcome, Dr. Pratt. I will now hand the presentation over to you.

>> DR. STEVEN PRATT: Thank you very much, Melanie. I apologize for the background noise. I have some vacuuming going on behind me. We will jump right in. As Melanie mentioned, I have a lot of information. I tend to talk fast, and that is why I wanted to make sure all the information is on the slides, so that if you don't track everything I say, you will still have the information.

The objectives for today's session are so examine the role inflammation plays in the disease process, define life-styles and reduce behaviors that impact inflammation.

By way of background, inflammation play as vital role in the health of our bodies. It is protective in normal circumstances.

But modern lifestyles have led to excessive inflammation and chronic inflammation that causes disease. Normally inflammation is a way the body protects itself.

There are negative impacts of too much inflammation. As the University of Wisconsin integrative health said, a moderate amount of inflammation is like a controlled fire that keeps us warm in the winter, but a raging fire had be disruptive.

If you watch sports and see somebody that gets injured and then they are on the sideline or bench with ice, that is because they are having excessive inflammation and they are trying to get the inflammation under control.

So, recent findings have found that low-grade and/or chronic inflammation can be harmful. It can cause pain, so it doesn't notify us that we need to make a change in what we are doing and it can mar the body's ability to heal. The low-grade inflammation can affect all area of the body including blood vessels, organs, the brain and joints. 70 to 90% of human diseases are related to to the activation of the inflammation.

I have a list of medical conditions that can cause too much inflammation. It is important to point out a couple. Alzheimer's disease. Having chronic inflammation can lead to dementia and heart disease, two of the most concerning health conditions we have in our society at this time.

How do you know if you have too much inflammation? Well, for one thing, doctors can test for something called C-reactive protein found in the blood plasma released as part of the inflammatory response and it tells us how much is going on in the body.

But it is not necessarily to task because leading an uninflamatory lifestyle is beneficial for everyone. You can use medications to reduce inflammation, as well likes nonsteroidal medications but you don't want to take them haphazardly.

Overall the components of an anti-inflammatory lifestyle are these, eating anti-inflammatory foods, not smoking, limiting alcohol intake, being active and exercising, getting a good night's sleep. Stress management, weight management and a healthy social life. They all improve your health and have been found to be related to inflammation.

So, I will start with an anti-inflammatory diet. Modern diets are intended to be more inflammatory.

And earlier I mentioned 70 to 90% of disease can be traced to inflammatory process. 60% of that, total, of that 75 to 90% -- so, most of it, can be traced to diet. One example is the Mediterranean diet. So I will give an example of the Mediterranean diet and talk about the components of an anti-inflammatory diet.

First of all, eating a Mediterranean diet and other anti-inflammatory diets addresses a lot of the illnesses I addressed on the earlier slide. Many diets have the same benefits because they are centered around eating whole, unprocessed foods.

The Mediterranean diet, traditionally in the last 40 years or so, we thought of fat as the enemy. If you want to be healthy and lose weight, cut fat out of your diet. But it turns out that is wrong.

Fat is an important part of the diet, but the sources of fat are important. The Mediterranean Diet is not a low-fat diet. It is a relatively high-fat diet but the majority of the fat comes from olive oil. And then other monounsaturated fats are also sources in the Mediterranean Diet.

This diet is Hite in omega-3 fatty acids from fish and plant sources and low Omega-6 to Omega-3 ratio. I will come back the those.

It is primarily plant-based with lots of fresh fruits and vegetables. When picking fruits and vegetables, color is your friend. Eat the rainbow, as they say. Vegetables that are green, orange, yellow, red and purple contain phytochemicals that have antioxidant properties and reduce inflammation.

So, other components of the Mediterranean Diet include would whole grains, legumes, which are beans and peas. Nuts and seeds, olive oil, moderate amounts of fish, seafood, white meat, eggs and fermented dairy like cheese and yogurt. Small amount of red meats, processed meats and sweets and low amounts of high glycemic carbohydrates. I will come back that that concept in a little bit.

In general when thinking about an anti-inflammatory diet. We want to focus on increasing the amount of omega-3 fatty acids that we consume. Omega-3 fatty acids are essential oils. Our body can't make them, so we have to get them from our diet.

I have the technical terms listed there. The EPA and DHA acids are strong anti-inflammatory agents. They consist of fatty fish and you can see several of them listed and there are also plant sources but the plant sources contain a different omega-3 fatty acid calls Alpha Lino Lee Nick acid or ALA.

There are algae-derived supplements that have higher levels of DHA and EPA. It is also interesting to note that the primary source of EPA and DHA in the diet is the algae. The fish eat the algae, or they eat other fish that ate the algae, and so the omega-3 fatty acids that we get ultimately comes from algae in the sea primarily.

As I noted, there are algae-derived supplements but they are probably not as helpful as other resources. A lot of research failed to show that fish oil supplements have health benefits. More recent studies have suggested they probably do. The reason for the difference in the outcome of those studies is that more recent studies have used higher doses of the fish oil.

So, one of the things that is important to note about Omegas is there is not just omega-3s. There are Omega 6s and Omega 9s.

Typical diets of Omegas have a ratio of 1 to 1 but modern western diets have a ratio of 10 to 1 and that is primarily due to the fact of seed oils and I will come back to that.

When I was preparing this slide, I put explanation points after the word olive oil. You should use it wherever you can. You can find olive oil mayonnaise in the grocery store and chips deep-fried in olive oil instead of seed oils and that really improves your health.

Olive oil lowers blood pressure and LDL cholesterol, which is the bad stuff that causes problems for your heart.

Another oil I want to mention is coconut oil. It is still being researched. It is not clear that it is beneficial. It is probably overall not harmful. It appears to increase HDL cholesterol, the good stuff, high density lipoproteins. But it may also increase LDL.

So, it is probably not a really great oil, but it is not probably a bad one.

Another oil that has come about recently in more and more use is avocado oil. Almost 70% of avocado oil contains heart-healthy oleic acid, Omega 9.

Some other healthy eating tips tea and spices, ginger and turmeric are good spices for being anti-inflammatory. You don't have to make a whole-scale change to eating, you know, fruits and nuts and vegetables. You can make steps.

So, for example, let's say you want to make a cake for some special occasion. How about a carrot cake with ginger and eggs from pasture-raised chickens, as well as olive oil, instead of other oils.

You have your nice carrot cake and a whole lot of healthy components. So, you can make changes like that that don't really detract from dietary preferences. That is just one example. And you can still moderate what you are taking in to improve your health.

Also, moderate amounts of dairy. For a time people thought that high-fat dairy was really bad for you.

Well, it turns out it is probably not. It is probably not particularly helpful. It is not a health-promotion component of the diet, but full-fat dairy is only mildly inflammatory.

Fermented dairy, like yogurt and kefir, and a number of cheeses, can actually decrease inflammation.

So, I mentioned the glycemic index or high glycemic foods earlier. That is a measure of how quickly your blood sugar rises after you eat.

When blood sugar rises fast, it leads to the body producing high amounts of insulin. Insulin can cause inflammation.

Carbohydrates like white flour, white rice and refined sugar are high glycemic foods. In fact, I will give you a little history about white rice. It is an interesting story.

We mostly ate rice that was whole grain up until the middle of the 1800s.

Before that, making white rice was done by hand, and it was labor intensive, so it was only done a little bit on rare occasions for special occasions.

Then someone invented *owee sheen*, that *Roed* rice, to make it white, taking out the husk of the rice and other components where the fiber was, and where most of the nutrients were.

We were left with white rice that has just as many calories, but without the healthy benefits of full grain.

This is not much of a problem in the western hemisphere, in the western world, because rice was a small amount of our diet.

But in Asia, rice was a high component of the diet. And when white rice was introduced into Asia, it led to a number of problems due to poor nutrition.

Most notably, vitamin B1, or thiamine deficiencies, resulting in a disease called *Berry*.

An example of move from traditional diets with whole grains to more processed foods really harms our health.

Low glycemic food means your blood sugar rises slowly after you eat. Whole grains include -- low glycemic foods include whole grain, starchy vegetables and fats.

Another thing that we want to do as part of our healthy anti-inflammatory diet is increase fiber. It slows the digestion of carbohydrates and lowers the glycemic index.

It will not raise your blood sugar as fast if you take a. Current evidence suggest that preantibiotics are more beneficial than antibiotics. Prebiotics help to optimize your personal gut biome. Prebiotics enhance your personal gut biome. Probiotics are from one set of probiotics. If you look at the market, there are a number of different ones out there, but you get something standardized.

Another thing found about the gut biome is it changes over time. It changes with dietary changes and with age. So, it is more helpful to have a prebiotic component of your diet that helps you optimize your personal gut biome than to use probiotics that force somebody else's gut biome on to you.

Good fiber sources include all The Usual Suspects: Whole grains like oats, brown rice, quinoa, laterally, bulgur wheat and others. Fruits, legumes, that are beans and peas. And starchy vegetables. I mentioned a few here, but there are many more.

Another thing that is important is maintaining adequate magnesium. It is involved in assisting over 300 enzymes in our body to assist with our metabolism. So, if you have magnesium deficiency, there is a widespread array of body functions that don't work as well.

This can affect the brain, the heart, and the muscles. It has been estimated that 60% of Americans don't get enough magnesium.

Good sources of magnesium include, once again, all The Usual Suspects. Nuts, legume, dark leafy vegetables, seeds and whole grains.

We also want to avoid inflammatory foods such as hydrogenated oils. Around 70 years ago people started to make hydrogenated oils for two primary reasons. First of all, they thought that making margarine and shortening from hydrogenated oils would be healthier than using butter or lard. Well, that was wrong.

And then, also, they become more shelf-stable with a longer life. At first they used partially hydrogenated oils because they are thought to not be as high in calories and would be better for you but it turns out they are trans fats which lower HDL cholesterol, lower the good stuff, and increase LDL cholesterol, the bad stuff.

They increase the risk of heart attacks substantially. So, trans fats have now been banned in the United States and other parts of the world, as well.

Fully hydrogenated oils are still used. Now margarines and shortens are made from fully hydrogenated oils. As I mentioned, they are more stable. That includes at high temperature, when deep-frying. If you run to a fast food restaurant and you are making French fries and you don't want to change the oil as often because it is expensive, you want to save money, so, make the food cheaper, you use a hydrogenated oil.

Unfortunately, hydrogenated oils are inflammatory. And then there is the refined seed oils. Another thing that our society turned toward, thinking that this was going to be beneficial, that this would be better for us than butter and lard. And so we started to use a lot of soybean oil, corn oil, sunflower oil, etc. These oils have a very high Omega 6 to omega-3 ratio, in some cases nearly 80 to 1.

So, they have pro-inflammatory properties. Probably they are only problematic in high amounts, but if you can take one thing away from this presentation, wherever you might currently use soybean oil, sunflower oil, et cetera, substitute olive oil.

As far as Omega 6s themselves go, the jury is out. It is not sure they in and of themselves are harmful.

What is harmful is when the ratio of Omega 6 to omega-3 is high.

And then there is saturated fats. Butter, gee, which is a butter product, removing the lard, coconut oil, palm oil, fatty meats such as sausages, bacon, cured meats and cheese. You will notice some of the things on the list were also listed earlier as not being a problem, or potentially being good.

One of the things that we found is that if you have butter, milk, full-fat cream, from a grass-fed cow, a pasture-raised cow, it actually has a lot of omega-3s. Plants have omega-3s. When that is the source of nutrition for the animal, that is what their meat and milk consists of.

Whereas if we keep the animals in a confined space and feed them grains, they develop a high Omega 6 to omega-3 ratio, just like the ratio in the grains that they are being fed.

So, butter, as you can get organic, pasture-raised butter, butter from cows that are organic, pasture-raised, that is actually not a bad source of nutrition. Same be fatty cuts of meat. They are not bad depending on what their diet is.

Also, cheese. I think it is important to point out that there are a lot of variations in cheese quality. There is processed cheese, single slices that come wrapped between little sheets of plastic. That is almost certainly not a very healthy source of nutrition. But cheeses that are made in traditional ways, probably are good.

It is also not just what you eat, but how you eat. When you eat fast, eat alone, or eat while multi-tasking, it causes stress. But if you eat slowly, savor your food, eat with other people, and eat while gathered around the table, it decreases stress.

Now, listening to the gist of this presentation, traditional diets, eating in traditional ways, is healthier, I suppose someone could say, gee, Dr. Pratt, do you want us to go back to the way we lived 100 years ago? No. I think there are a lot of benefits to technology and having things automated. I like to use the dishwasher.

I don't want us to lose those benefits, but at the same time, if we can find ways to incorporate some of the healthier aspects of the traditional lifestyle that we have lost, or are losing, and find ways to incorporate those into a modern lifestyle, that would be really helpful.

One of the things that has happened over the last maybe 30 years or so, or maybe a little more, it stopped being as easy for families, extended families, to get together for holidays and have a big holiday meal. So, that was a really healthy thing. It was a social activity. We ate slowly, we savored our food, we had good conversation, mostly, with other people.

And with the families having scattered, it is not nearly as easy to have that kind of traditional gathering anymore. But one thing that has developed is the idea of Friends giving, a modern adaptation that recreates some of the benefits of a traditional lifestyle into a modern lifestyle.

The more we can find ways to do that, the healthier we will all be.

So, that is the end of the section on food. And as I showed at the top there, there are a number of other things that are important to an anti-inflammatory lifestyle.

Smoking affects the systemic inflammation. It activates and releases inflammatory cells into circulation. Widespread, throughout the body, smoking can cause inflammation in every area of the body. One of the things that researchers have done is measured the C-reactive protein in smokers.

I mentioned the C-reactive protein earlier as a measure of inflammation. It is released into the bloodstream as part of the inflammatory response. Smokers have a significantly increased level of C reactive protein.

What they found is there can be a significant decrease in C reactive protein by about five years after a person stops smoking, but to get the proteins back to the same level as someone who never smoked takes 20 years.

Chronic inflammation is associated with alcohol-related conditions. One of those is called a gut micro Flora-derived lipopolysaccharide, or LPS. This normally exists in the gut.

Alcohol appears to make the walls of the gut leakier, so that LPS leaks from the gut into the bloodstream and causes inflammation.

Alcohol appears to impair the liver's ability to detoxify LPS, as well. And alcohol may impair the central nervous system's ability to regulate information to neuro-immunoendocrine actions. Neuro, the neurological system, the brain, the nervous system, and immuno, the immune logical system, and endocrine, the hormone system. All of those things act in harmony.

So, the way we think can affect our immunity. The way we think can affect our hormone levels, and vice versa. All three of them interact.

It has been found that when people are depressed, for example, they are immunocompromised. They can't fight off illness as well.

So, alcohol is a depressant, and it has a negative impact on the brain, that immunological system that fights disease, infection, and the endocrine system that regulates our hormones.

There is evidence from studies in mice that alcohol increases the levels of inflammatory cytokines, small proteins involved in cell signaling that can lead to disease. Recently there was a study that got a lot of attention, maybe two or three years ago that said any alcohol was harmful. Well, it is not considered to be the truth, until more studies are done to confirm it. For men having more than one to three drinks per day and for women one to two drinks per day is a threshold for when alcohol starts to cause health problems.

Why the difference in men than women? It is interesting that men have an enzyme in their gut that breaks down alcohol. So, only roughly half as much alcohol reaches the bloodstream in men than in women.

Exercise. Again, another one of The Usual Suspects in promoting health. Exercise -- well, first of all, what has been found in recent years is that inactivity is the real bad thing. Sitting for prolonged times undoes the positive impact of exercise.

I think it is important to keep that in mind. If you have a job that leads you to sitting at a desk for long hours, it is important to take frequent breaks and get up and move. Walk around, do some stretching. That helps in other way, as well.

What I find is that, especially if I am stuck on something, or frustrated with something, I walk away, come back even 30 seconds later, and I look at it with fresh eyes.

So, I find -- and studies find that, people are more productive when they take frequent breaks. So, inactivity is very bad. It leads to an accumulation of visceral fat. Visceral means the center of the body, the abdominal area, around the organs, which leads to activation of a network of inflammatory pathways.

Exercise lowers inflammation, in part due to decreasing visceral fat, but also induces anti-inflammatory pathways.

Again, as I mentioned earlier, the way science works is that you do a study, you have an interesting finding, and then other people repeat it and see if they get the same finding, and if it is consistently found after many different tests, then it is thought to be the truth.

So, in one study, engaging in exercise 22 times per month led to a 37% decrease in C reactive protein. Another study found that occasional exercise was associated with a 39% decrease in C reactive protein. So, I think the bottom line is, we just know that we need to move more.

And another interesting finding is that exercise related decrease in C reactive protein is greater in men than women, so it is even more important for men to get regular exercise than for women.

Endurance athletes have been found to be more susceptible to infection. And the theory -- it is not tested and proved -- but the theory behind that is that they have lowered their rates of inflammation so much that they are immunocompromised state.

Sleep. Sleep decreases blood pressure. If we don't get enough sleep, then blood pressure doesn't lower enough. And if the blood pressure stays high, blood vessel walls respond and trigger inflammation.

Even adequate sleep leads to accumulation of beta amyloid, linked to inflammation in the brain and brain damage as far as getting enough sleep, I think using a sleep tracker is really helpful. I got a sleep tracker in 2021, 2013, shortly after they first came out. The whole time you are in bed, you are not sleeping so I adjusted my time in bed to be over eight hours so now I get close to 7-1/2 hours of sleep. I found using a sleep tracker to be fantastic for my health.

My blood pressure lowered, my mood improved and an all-around good outcome from improving sleep. That is consistent with all the studies find.

Stressful events activate the fight, flight or freeze response, which increases the blood pressure and pulsion, and induces inflammatory pathways in the whole body, including the brain.

So, chronic stress leads to increased levels of C reactive protein. Psychology stress triggers inflammatory activity and plays a critical role in the onset, maintenance and recurrence of depression.

Many chronic mental health conditions lead to worse health outcomes. Physical health outcomes. To, managing mental health is actually an important component of managing physical health.

Another really good example is post-traumatic stress disorder. That is, just as it says, stress. It is a chronic stress condition that leads to all kinds of -- or is associated with all kinds of physical health problems.

Weight. Inflammation increases with weight. Levels of C reactive protein increase with weight. Weight gain triggers leptin resistance. That is a hormone that tells the brain when to eat and when to stop eating, when to speed up or slow down metabolism. In a normal weight person, you eat, leptin is released, it tells your brain you are full, and you stop eating.

When people are overweight, they become resistant to the leptin, so the brain thinks that the body is starving, even when it is not.

So, weight gain leads to more weight gain. It is a vicious cycle.

Psycho-social issues have been found to be very important in inflammation, as well. Having psycho-social stress leads to increased inflammation. Having a strong social network with people that you care about and care about you, and you have regular interactions with them, is found to decrease inflammation.

Also, recent findings have shown that even something called weak social connections help improve health. People you see regularly. You may not know their name but you see them regularly in some place or another, you say hi, you may chitchat for a few seconds, but you don't really know them -- those little interactions have actually been found to improve your health. When you are out and about, smile and say hi to people.

Social disengagement can lead to up regulation of inflammatory responses including decreased levels of C reactive protein.

So, the up start take-home point to lead an anti-inflammatory lifestyle, we need to make lifestyle changes. It is a hard change. It is not about Will Power but changing habits. Changing habits, what does it take to change a habit? First, you set a reminder, okay, every day at 5:00 when I get off work, I go for a 2-mile walk, and it takes some effort at first. You have an alarm that sounds, okay, it is time to walk. Depending on the magnitude of the change, it varies how much time it takes from it to go to something that you have to get yourself to do, to something that becomes habit.

And for a change like the one I just mentioned, it is probably about three months of after three months it becomes, okay, it is time to walk, rather than oh, my alarm just went off I have to get myself out the door and walk. It becomes oh, it is time for my walk.

So, changing habits is really the most effective way to think about lifestyle change. Incremental changes over time may be more successful than wholesale changes. If you walk away from this thinking I am going to make every single change listed in that PowerPoint, it would be overwhelming.

But if you took the one tip that I stressed the most, replace your cooking oils, whatever they are now, with olive oil, it is one little change, and, actually, I think, it tastes a lot better. But that is just me.

So, making those incremental changes rather than a wholesale change. And then make the next one, and then make the next one. Over time you found that you have made 20 small changes and your overall lifestyle has changed.

I had to go through something a few years ago. I developed gout. It turns out 70% of the risk for gout is genetic. My mom had gout.

I was shocked that I had developed gout, because people think of gout as being associated with people who are overweight, and I am not. And 12% of the risk for gout is related to diet.

So, I thought, I am going to change what I can. Gout is really painful, and when you have a gout outbreak in your foot, you pretty much can't do anything.

So, I set about making changes in my diet. I already had a fairly healthy diet, but I got something called the Blue Zones Cookbook and started following the recipes in there.

Over the course of making that change, I dropped 15 pounds without trying. I felt like I was overeating at times, but I still dropped 15 pounds, and I stopped having gout outbreaks. I haven't had one now in about two years.

So that is a way making a positive lifestyle change can impact your life.

So, in summary, up to 75 to 90% of human diseases are related to activation of the stress system, which results in inflammation. Up to 60% of chronic diseases can be prevented by diet.

Activation of the stress system and diet are modifiable risk factors. That means we can change them. We can improve our health by making these changes.

And making adjustments in these areas are what we focus on. Eating inflammatory foods. Not smoking, limiting alcohol intake, being active and exercising, get a good night's sleep routinely, stress management, weight management, and maintaining a healthy social life.

As Melanie mentioned, I have these references. Most of the material on the slides can be found in these references, and with that, I will turn it back over to Melanie.

>> MELANIE ORDONEZ: Thank you so much, Dr. Pratt. That was full of information. I can tell you, I have so many questions I saw coming through. A lot of them, I will say, that people with are asking questions that are really specific to them.

So, I want to encourage to you talk to your physician. Take this information that you have, and talk to your doctor and ask about changes that you want to make. Make sure it is right for you. Dr. Pratt had great information and I wish we had time to good go into more details about it.

He did give you a lot of resources you can use to continue to look up how to lead this anti-inflammatory life. I want to remind you, too, you have your program benefit available. Maybe called Embrace, or EAP, the Employee Assistance Program. That benefit is available to you. I am going to put a link in here so that you can get to the website, or find your member website.

If you cannot find it using this link, I encourage to you reach out to your management or HR Department, because they can give you the specific website you need to go to.

We specialize, actually, in behavior changes, right? So, Dr. Pratt talked about all these different changes to make, but he also really emphasized at the end that incremental, small changes, are the way to go in making this fit for life.

So, we encourage you to use these benefits to get more information on health ale wellness topics, ways that you can incorporate this into your life, and we encourage to you speak to your medical doctor so you can find out more information on what you need to do specifically for your health conditions to help you live the best life possible.

I do want to -- Dr. Pratt, it looks like we have somebody -- somebody asked one question I do want to address. Is it the blue zone cookbook by Dan Butner?

>> DR. STEVEN PRATT: Yes, that is it.

>> MELANIE ORDONEZ: Okay. I will put that here so everyone can have it. I am pulling up the closing question. And I will also -- let me put this in the message for everyone, so you know what cookbook that is. There you go.

We are out of time. We appreciate you all for taking time with us today. Please feel free to answer the satisfaction poll. Click the radio button next to your response. It will broadcast the answer to us. We are not broadcasting to all. We would also love to hear any feedback you have about the session today.

Type in the text box at the bottom. That will send the message to us. We are not broadcasting. There is a certificate of completion to download. If you do that by hovering over the handout and clicking the download icon. Thank you so much for joining us today.

This does end our presentation. Thank you so much, Dr. Pratt. We appreciate you.

>> DR. STEVEN PRATT: Thank you.

>> MELANIE ORDONEZ: Have a wonderful day, everyone. Bye-bye.

(Session was concluded at 1:47 p.m. CT)

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