

Dr. Ron Ehrlich: Hello and welcome to “Unstress”. I'm Dr. Ron Ehrlich. Heart disease is still the number one killer and closely followed by cancer. Today we're going to get some great advice on both those and much more. My guest today is Dr. Jason Kaplan who specialises in sports cardiology, integrative and preventative cardiology.

Jason studied medicine at UNSW and graduated with honours. He went on to study internal medicine and then went on to complete additional advanced training in medical oncology and pharmacology before finally doing adult cardiology. But of course, learning never ends the more you learn the more you realise you need to learn. It's what makes health care and in fact life so interesting. But as you'll hear Jason then went on to take a more holistic integrative approach to patient care. Particularly those with multiple medical issues. I hope you enjoyed this conversation I had with Dr. Jason Kaplan.

Welcome to the show Jason.

Dr. Jason Kaplan: Thank you, Ron.

Dr. Ron Ehrlich: Jason you are a cardiologist and doctors have a very, very long journey at the best of times and specialists even longer. Can you give our listener a little bit of background as to your own journey to this point in time?

Dr. Jason Kaplan: Sure, to train in medicine it's usually five to six-year undergraduate degree in Australia though a lot more degrees are becoming post graduates and then you do what usually is two years of internship and residency and then to become a cardiologist or become a specialist position usually do around two to three years of training and adults internal medicine for various specialties.

I did that and then afterwards after my training in internal medicine, I spent some time doing medical oncology and also pharmacology before doing three years of advanced training. Three years just purely focusing on cardiology and in actual fact, the time spent in on oncology and pharmacology has put me in very good stead to be a cardiologist.

Having extra knowledge in areas of Medicine that you often don't get exposed to very often. It helps me to take care of patients in a better way and interestingly there's a very new emerging field called “cardio-oncology” which is one of the big growth areas. There's a lot of new treatment for cancer these days. These are drugs that are much better cure rates than traditional chemotherapy. They're more biologic and more targeted cancer therapies but some of them such as one we use for breast cancer called Herceptin actually has effects on the heart.

What's really interesting Ron is that more women will die from heart disease, than breast cancer in Australia and women will also develop complication from treatment for breast cancer more often will actually die from the breast cancer.

That time in oncology's meaning in very good stead, an extra experience. In pharmacology, we used all different fields of medicine and in cardiology, we use a lot of drugs to treat heart disease and it was a very helpful time spending time in that area.

Dr. Ron Ehrlich: Gosh you really covered the two big ones there, haven't you? I mean heart disease and cancer are the two big killers. They're vying with each other. Is heart disease still...

Dr. Jason Kaplan: They are the two biggest killer and heart disease, or coronary artery disease, cancer and stroke are some of the three biggest causes of death in Australia and they share a lot of the same risk factors.

When we talk about lifestyle and dietary change things that will help heart disease will also reduce people's chance of getting cancer and also when I talk about heart disease the majority of strokes, it's the same disease process. It's vascular disease or atherosclerosis or the disease of the arteries affecting the heart but also the disease of the arteries going up to the brain to our carotid arteries, our aorta.

All of the same risk factors apply to all the blood vessels. They just may get affected in very different way. When we say treating heart disease we're also treating people's chance of developing stroke but also Ron we're actually looking at something even more interesting is that a major cause of dementia or cognitive decline in people these days. It's not Alzheimer's disease which is a major cause but it's vascular disease. It's a chronic effect of diseases like high blood pressure, high cholesterol, diabetes, having effect on our brain matter that causes people to start to lose their cognition as they get older.

When we're treating cardiovascular disease risk factors we're actually treating brain disease as well.

Dr. Ron Ehrlich: I think what a message I'm getting from this is that we're treating a whole person.

Dr. Jason Kaplan: We're treating the whole person. No, there's always a tendency when you become a specialist to just focus on the organ that you're dealing with and have a very sort of narrow focus but you and I both know as healthcare practitioners there is whole person in front of us because this whole person got other things going on in their life and especially in this area where life in modern medicine today with lifestyle becomes so important to what's going on in terms of your diet, what about alcohol? Tell me about how much exercise you do or what's your fitness program or what's going on in your emotional world at the moment? How stressed are you? These are some of the things I try get from people which is a major impact on their health.

Dr. Ron Ehrlich: I was going to ask you but you've already I think just answered it and that is what does holistic mean to you? I think you've kind of nailed it there. Trying to add up all those years there Jason I mean we're talking about 15 or more, 15 to 20 years of study and you've talked about lifestyle medicine, what component of your official tuition in these institutions has been taken up with diet lifestyle medicine?

Dr. Jason Kaplan: That's an excellent question. My formal medical training in medical school in six years there were about four lectures on lifestyle medicine, three lectures on nutrition and maybe one on exercise. We spend a lot of our medical training, dealing with sick people, so I became an expert at dealing with very sick patients in the hospital and then doing a cardiology training, you deal with very sick people who have heart attacks or heart failure but actually we spend very little time thinking about lifestyle. Then I knew from when I finish my cardiology training I was seeing people way too late in their disease course that before they had their first heart attack before they developed bad heart failure that we had to try to catch them early and so I got into the area of cardiac prevention. I became very interested in non-invasive ways, ways that we can detect early signs of heart disease. When you can detect early signs of heart disease early enough lifestyle becomes very, very important in treating it.

My journey after eight years as a consultant in cardiology has been learning about the different parts of lifestyle medicine and it's really on-the-job training. We go to overseas conferences which are a great way to connect with some of the leaders. I was fortunate enough last year at the American College of Cardiology to meet Dr. Kim Williams. Kim Williams was the ex-president of the American College of Cardiology and what is amazing Ron is he's vegan and he had a heart attack and a cardiac event and then he turned vegan and has been the most amazing proponent for plant-based diet and nutrition over the last few years. He goes around speaking to other cardiologists and other people about it and then you might be heard of people like Dean Ornish as one of the world's most well-known preventative cardiologists. There're opportunities to learn from these people and try to take the best of having had a chance to meet them and learn from them and integrating it into my practice.

Dr. Ron Ehrlich: I just want to get back a little bit because you said something there about more targeted pharmaceutical solutions to cancer and I guess that's interesting because we've had a couple of shows more recently about cancer as a metabolic disease. What are the pharmaceutical, what are the targets now? I mean it was kind of almost like a shotgun before and it took down a lot of healthy tissue with it. What's changed?

Dr. Jason Kaplan: Look, you're right, it was a shotgun. When I started my year, I did a year of oncology about over ten years ago now and at that stage some of the newer agents were just starting to come out but still for the majority of cancer people got very toxic chemotherapy that killed a lot of very healthy cells, killed blood cells, made it more susceptible to infection and often combinations of these were used and made people very sick, so I was treating complications of chemotherapy throughout the time.

Now we use what's called targeted therapies or biologics and these often target a specific protein on the cell membrane or a specific part of the cancer cell, unique to that individual that then allows a much more targeted therapy as opposed to wiping out a whole lot of normal cells and healthy cells to attack the detected disease cells. Often people will get what's called cell markers on some things like lung tumours and breast cancers that allow and also renal cell cancers without very targeted therapies and just target actual cancer and not the whole healthy cells.

Dr. Ron Ehrlich: I guess that's really exciting to hear there are some exciting developments because it's such a huge problem. I don't think a single person listening to this podcast would not know somebody within one degree of separation from them who hasn't been affected.

Dr. Jason Kaplan: Everyone is affected by it by counts and I'm sure many people also simply know how sick people can get with traditional chemotherapy. That's still used a lot today that it's an exciting time in the field.

Dr. Ron Ehrlich: Now you mentioned early signs of heart disease. If we can get those early signs of heart disease identified then, that's a good time to intervene. What are some of those early signs of heart disease?

Dr. Jason Kaplan: What's interesting Ron is that for a quarter of all men have a heart attack they'll often be no presenting clinical signs. The heart attack will be the first presentation that they have heart disease, but I became very interested in technology that was brought to Australia by a colleague Dr. Ross Walker. He was the father of calcium scoring in Australia, he lost back in the late 90s brought a coronary artery calcium score into Australia and he was really ahead of his time and now it's a standard test to look for early signs of atherosclerosis. Plaque build-up in the coronary arteries. What it is it's a very low dose cat scan of the heart that can pick up very early signs of plaque and also can quantify that plaque. The more plaque that we have the greater the risk is. But if there are any small amount there's opportunities for intervention and to actually know that someone has heart disease, you have heart disease or atherosclerosis and then you actually start to take action. There's something about it before it presents as a clinical event. In a clinical event it's a heart attack or a stroke.

Dr. Ron Ehrlich: I know, Ross was one of our first guests and apart from the fact that I went to school with him. He wasn't talking about at the time, but he mentioned to me years ago about the coronary CT score and he said anything over 400 don't read Tolstoy.

Dr. Jason Kaplan: That's right. The scores over 400 are associated with significant increase in cardiovascular events and we're actually refining the risk as more and more research comes out but if you have a calcium score greater than 100 it does confer 10 times increase relative risk of having an event compared to the other people to compare to a calcium score zero. Now, most of us get some calcification in our arteries as we age but some people will have more calcium than others.

What is really fascinating there was just wonderful study presented last year about the Tsimane people from the Amazon jungle in South America. These are a traditional tribe of hunter-gatherer peoples who live on a very simple diet of fairly lean game, fruits and vegetables, overall fairly low-fat diet. This group of hunter-gatherers have the lowest incidence of coronary artery disease in the world. They went and did calcium scores on many members of the tribe and they found that their arterial age and their calcium score on average was 27 years younger than the average Western person.

Dr. Ron Ehrlich: Wow. Tell me on that calcium score level because at the back of my mind and I don't want to shock my listeners all you with my score but if you get up to let's say is 200, 20 times more, 300, 30 times more. Does it go like that?



Dr. Jason Kaplan: It's not quite as linear but the higher it is the greater the risk. It's not always a linear risk.

Dr. Ron Ehrlich: Coronary CT scores, 25 percent of men have presenting signs so that is a better screening tool.

Dr. Jason Kaplan: Then we have more sophisticated tests and get them to actually look for any narrowing's that may be present and that's when something like your stress test or your stress echocardiogram may be helpful.

Now calcium score should be used in any man of the age of 50. People get their colorectal cancer check, they get a faecal occult blood and calcium and for people that have primary care doctors and haven't had a calcium score if you're a man over the age of 50, I'd be speaking to your doctor about getting a calcium score. The radiation dose is equivalent to about five chest x-rays, it takes about two minutes in a CT scanner to do and it's a very powerful marker of a future cardiovascular event.

Dr. Ron Ehrlich: What are you saying to women then?

Dr. Jason Kaplan: Women develop coronary artery disease a little bit later in life. Most of them seem to be protected prior to menopause so usually, I'd recommend for women to get it around the time of menopause or just afterwards. What we are seeing also now is a trend in women who are often-presenting heart disease later than men but slowly as one gets to the age of sort of 70 their incidence of heart disease is almost equal to men.

Dr. Ron Ehrlich: Is that when you would be recommending this?

Dr. Jason Kaplan: For a woman, I recommend at the time of menopause to get a calcium score.

Dr. Ron Ehrlich: Okay, now listen, I mean it's interesting cause for the last 30 or 40 years, of course, we've been told low fat is bad and cholesterol the lower the better is good. Yet we still find ourselves 40 years later with heart disease. What's the story? What's your take on cholesterol? Should we be concerned?

Dr. Jason Kaplan: It's not an easy answer and for some people that are having lots of I guess bad cholesterol that often returns LDL. It's low-density lipoprotein but we're getting a little bit more sophisticated than that. What I would do for a lot of people, is I would look at the type of cholesterol that people have and there are certain types of cholesterol particles that are more likely to cause atherosclerosis or to cause deposition in the arteries as opposed to others. Often more dangerous types of cholesterol or what's called small dense LDL and less dangerous I guess the lighter fluffier LDL.

Often when someone comes to me for an assessment I will do what's called an LDL sub fraction analysis and look at that type of cholesterol. Often, we might do some other advanced lipid markers such as apolipoprotein B or lipoprotein(a) which are also other

markers that your cholesterol may be a little bit more dangerous for you. It's different for every person.

We as a health care practitioner know that our bodies are so intricate and all of us is so different. A lot of us handle cholesterol very differently by the liver and how our body handles it and interesting we only just finding out what an important part that the gut microbiome plays in this equation as well.

Cholesterol is important for the synthesis of cells and hormones and cell walls. Having some cholesterol in our diet is absolutely essential. For some people having more of certain types of foods is going to be more dangerous. Now we're not quite at that point of totally personalised medicine yet though we are entering into that age very quickly.

I'll give you an example. There's our gut produces an enzyme called TMAO. TMAO people with high TMAO levels in their guts have been associated with significant coronary atherosclerosis and TMAO is produced in our gut by the ingestion of choline. Choline is formed and found in foods like eggs and meat and processed meats and if you produce more TMAO, and you have a lot of choline, you're going to produce a lot more plaque and more plaque in your arteries.

What's really interesting is that people that are vegan, they not produce TMAO. For some people, the question is "Is bad or good?" Well, it depends on what's going on in the individual. We all need some cholesterol and certainly I don't think that the whole low-fat diet, has shown to be that the best thing for everyone because that was going on in the 70s, the 80s even most of the 90s yet we're still seeing a decent amount of heart disease. That is not totally the answer and certainly there are plenty of good fats. The predimed study which was the largest diet intervention study ever done with over around seven and a half thousand people looked at a Mediterranean-style diet with plenty of olive oil, fruit and vegetable, nut consumption, actually a fairly low consumption of meat, in analysis done five years later still shows the same result for the shoulder reduction in heart disease and the people in the intervention arm were given one litre of olive oil to have a week. They had plenty of good fats in a diet.

Dr. Ron Ehrlich: It's interesting you mentioned Kim Williams who I hadn't heard of but Dean Ornish I certainly have and both they're so big on making vegetable, the basis of the diet but there's another aspect to it that I'm sure that the Tsimane in the Amazon and the people in the Mediterranean also did that wasn't related to their diet and that was the level of emotional stress which you touched on in your assessment.

Dr. Jason Kaplan: I think emotional stress and chronic stress is one of the biggest challenges that we face as a society today and there's often a reason for the development of heart disease. There's this wonderful book called "The Blue Zones", you might have heard about it that looks at some of the world's longest living people and what are some of the key characteristics we can take from some of the world's longest living people and people in Sardinia or the Seventh-day Adventist communities in California or some of the Okinawan communities in Japan. One of the key things that are shown in longevity in these people is a lower level of emotional stress, a slower paced lifestyle.

The community is set up in multi-generational families. They take time out to rest a few days a week. All these things become important and we live in a city like Sydney where the lifestyles are very fast-paced. How many of us actually take a day out to rest and unhook ourselves from all the electronic media and the smartphones and all the stimulation and actually really allow our bodies a chance to rest and connect with the ones around us.

Dr. Ron Ehrlich: It's a message that is a recurring theme on this podcast. Now listen I wanted to ask you about your association with the Blackmores running festival which I know is coming up in September in Sydney and another hat that you wear is a sports cardiologist. How does that differ from what you're seeing in your everyday cardiology practice?

Dr. Jason Kaplan: Okay, I feel very honoured to be associated with the Blackmores running festival and my interest in sports cardiology which is a fairly new field in cardiology. What it involves is both the screening of professional athletes it also involves the assessment of athletes of all levels with different forms of heart disease but also as well is looking at the normal people who are not professional athletes, the people are interested in becoming more active and maybe at risk of heart disease.

As a sports cardiologist, I've been involved with a screening of some of the professional soccer teams and rugby league teams and cricket teams and also some of the Olympic athletes. People who do at the outstanding level in their sports things like endurance athletes' hearts are very different. Their hearts adapt in certain ways often the chamber size becomes bigger, people who are very fit has much lower heart rates. For some people, their hearts may look quite abnormal but it's normal for them and often it can be very specific sports.

For example, a rugby player heart may look very different to an endurance runners' heart or hockey player's heart. It's also learning about some of the specific changes that may occur depending on the type of sport that someone plays. This has been an interest of mine in practice and so this as a sports cardiologist we receive a lot of athletes with different forms of heart some normal, some abnormal but the key message I think with a Blackmore's running festival is that exercise is one of the best ways that people can reduce their cardiovascular risk and people just need to go out and get moving. I think one of the major problems in our society is that people just not moving enough and not doing enough physical exercise. Over the age of 50 years old our level of fitness in men and women become one of the most important factors on what a long life we're going to live. The most important factors in longevity. If you are fit and able to move, then you're going to be able to deal with what life throws at you whether it be heart disease or any other physical ailments.

Dr. Ron Ehrlich: What do you think the minimum amount of exercise? That's why I like you using the word moving because people feel intimidated by the word exercise but moving is a sort of "yeah, we can all move". What do you think? What should we be doing on a minimum level?

Dr. Jason Kaplan: Even on a minimum level 20 minutes of moderate paced of a brisk walk has been shown to reduce our chance of having a heart attack by 25 percent. I think most of us could find 20 minutes in the day. Even if you couldn't do 20 minutes in one go even if you broke it down into to 2 x 10-minute periods where you did a brisk walk, less than a brisk

walk or a light jog less than 10 kilometres an hour. This is not a fast one and just to get moving.

I encourage all of my patients to get a fitness tracker and to try get their 10,000 steps a day at a minimum. You do not need a lot of exercise to make a significant difference and I often get asked Ron about what is that specific type of exercise that is going to be better for my heart and thing is for most people your heart is not going to distinguish for the type of exercise that you're doing. Your body just needs to exercise. You need to find something that you enjoy doing and running, or any sort of low-impact exercise but something that gets your heart rate up that you feel like you break a bit of a sweat and you can still talk to someone but it may not be totally out of breath. That's really the minimum that the people need and then people can still get a significant amount of benefit and that's why I like the Blackmore's Running Festival because there's opportunities for people of all fitness levels as a 3 and a half kilometre, there's a family run, there's the half marathon, a marathon and the bridge run as well.

Dr. Ron Ehrlich: Listen you said something too about the differences between different athletes and I think that's intriguing. For example, a runner, how would a runner be different from a rugby player?

Dr. Jason Kaplan: A rugby player has different body types. Rugby players are much more strength athletes. Sometimes in terms of the training that they do, some of their heart muscles may thicken so instead of dying off getting a bit bigger in your heart cavity, getting bigger an endurance runner, the rugby players heart may thicken, and some chambers may enlarge in a slightly different way. While an endurance athlete heart often gets a little bit bigger and dilates and is actually much more efficient at pumping out blood. So they often have a very slow heart rate as well.

Dr. Ron Ehrlich: This is another interesting thing that intrigues me. When these elite athletes who have really trained hard in the first 10 or 15 or 20 years of their lives and then they stop. I mean that must pose some real challenges from a heart health perspective.

Dr. Jason Kaplan: It is interesting and it is a challenge because often their bodies have been so used to doing a certain amount of exercise and suddenly start to detrain. Some of these athletes become deconditioned fairly quickly. But what I found and looking after X professional athletes is that when they want to get back into exercise they find that their bodies have an innate ability to get back into a fairly high level.

I really take from that is that developing level of sickness. I just tell patients this is a health asset. The time we take care of our body and our level of sickness and the things that we do, that's really a health asset in terms of standing us in a good stead for many years to come. There have been multiple studies that show that if we are fit in our 30s and 40s that translates to longevity in our 70s and 80s.

Dr. Ron Ehrlich: Okay, what's encouraging. You may have already answered a lot of this but if we wanted to leave our listener with three or four tips for wanting to prevent heart disease

or just be healthy... You've covered some of them but let's list them out for our listeners just a couple of hints that you would give them.

Dr. Jason Kaplan: Number one with the message that the Blackmore's running festival is to get moving. Make sure that most days you do some sort of physical exercise and get moving or at least a minimum get your 10,000 steps a day. Often, I like to tell patients though it's good to vary the type of exercises, I have a lot of patients that are very interested in doing lots of high-intensity exercises and I often encourage them to do something a little bit slower like yoga or Tai Chi or Pilates as well that involves some breathing and perhaps some meditation as well.

I really think that the nutrition or the food that we put into our body and how we feed ourselves makes a major difference. The more and more we're finding that atherosclerosis or plaque build-up begins in our teenage years. It's all the food that we put in and people follow junk food, it's going to have effects on your body for many years to come. Choosing a whole food plant-based diet is one of the best things that we can do and eat more plant-based foods is a significant way to improve our health. One of the things that I tell my patients is that if you do eat a lot of red meat think about substituting plant-based protein for one or two of your red meat-based meals in the course of a week.

I think it's really important that we de-stress, that we connect with the people around us and stress becomes a chronic problem and we all need to be able to recognise it. If we can't recognise you get people around us who can so we can take action before it has deleterious effects in our body.

One of the things I always tell people is that people come to me with a lot of supplements and a lot of them take a lot of medication take a lot of supplements and you can't out supplement or out medicate yourself out of bad lifestyle choices. The lifestyle choices we make form the building blocks of our own life of our health for many years to come and they're the most important things to get in place for cardiovascular longevity.

Dr. Ron Ehrlich: That's terrific. Just finally and taking a step back from your role as a cardiologist and just perhaps a personal observation for yourself, what do you think the biggest challenge is for people on their health journey in our modern world through their lives?

Dr. Jason Kaplan: I think that two challenges. One is that we are bombarded with information. There is so much information coming at us, as you know the body of medical knowledge has doubled or tripled since I was in medical school and then making sense of the wide array of medical information that comes to us. That's why I think Ron what you are doing on podcasting you're getting good knowledge out there to people is so important.

I think it's challenging for people, to actually makes sense of volume in the new health knowledge. We become educated by how we can assess a new piece of health knowledge that is coming our way where was the study published, what sort of study was it was done by, is it publishing a reliable journal or publication? It's making sense of all the health-knowledge.

The second part is how are we then integrated into our lives. We all have such busy lives and then actually finding the time to actually be able to do things that nourish us and they're good for our lifestyle. One of the things I found most beneficial especially in my health journey is about doing this as part of a community that was much more likely to exercise or to make healthy lifestyle choices. If we're not just accountable to ourselves but to the whole community of people's. That's why I think a lot of group exercise classes are very attractive for people where people can learn to exercise together in order to talk about some of the healthy life choices together as well.

Dr. Ron Ehrlich: Jason thank you so much for joining us today.

Dr. Jason Kaplan: Thank you, Ron, it's an honour being on your show.

Dr. Ron Ehrlich: We've covered some territory there. Our show notes are always worth the read. Now in case you missed it, Jason referred to TMAO - Trimethylamine N-Oxide. It's a gut metabolite that the New England Journal of Medicine study recently linked to heart disease. We'll have links to that if you're interested.

Jason mentioned Dr. Ross Walker. Now we did a terrific interview with Ross earlier this year and both Jason and Ross mentioned a coronary calcium CT scan. Again, we'll have links to some information about that. Definitely worth exploring. How about that statistic 25% of men's first symptom of heart disease is a heart attack? It's also liberating to know you don't have to move all that much to make a difference and I like the idea of the community to help you get there. I know my wife wears a Fitbit and has a group of about 15 or 20 close friends that monitor each other's walking. Look it can get a bit competitive but probably the better word for it is supportive. The key message is to get out and move and do it regularly.

Now the Blackmore's Running Festival is on every year and this year it's on the 18th of September. We will of course have links to that as well as links to Jason's website. He practices here in Sydney Australia. Some interesting stuff coming up in the next few months. People look out on my web page, we've got an eBook series coming which will be a practical guide to "Unstress and simply be well". I'll also be doing some short webinars on what a holistic approach to health care is all about is and also the role of the food and pharmaceutical industry in all levels of healthcare. A story that is easy to miss but once you hear it it's difficult to ignore.

We'll be starting a new five-week online course as well in the coming months exploring the five pillars of health and wellness. That'll be towards the end of October early November. Until next time this is Dr. Ron Ehrlich, be well.

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