



## **Expert Voice Podcast- Teneille Newton CONTENT EDIT.mp3we**

**Victor** I'm Victor Tuballa, and this is Expert Voice, Eagle Natural Health's podcast and your partner in natural health well-being. Joining us on the line today from the Sunshine Coast is Teneille Newton naturopath, CEO and founder of the Naturopath's Kitchen. Teneille is also a fitness leader and has been involved in the health and fitness industry for over 15 years. The treatment and practice is centred around dietary and lifestyle modifications to positively impact lifestyle based chronic conditions. I'm also very proud to say that Teneille is someone who I've worked closely with for over the last 10 years. I'm pleased to welcome her today to this podcast. Teneille, thank you very much for your time today and welcome to Expert Voice.

**Teneille** Great to be here with you today.

**Victor** We're going to be talking about mitigating stress toxicity and immune function. In other words, how stress can be toxic to us, and how it could affect our immune system. It is well known in today's society that excessive stress is bad for us, but science indicates that at a certain level, stress may actually be helpful to serve our needs. Can you describe the different types of stress, which is helpful and which is considered unhelpful and how that may manifest in our lives?

**Teneille** Fundamentally our stress response is our bodies primal physiological response to things in our environment that we perceive to be a threat. You might have heard of it as the fight or flight response.

Stress triggers a release of hormones including cortisol and adrenaline. When we're stressed, we experience an increase in our heart rate and blood pressure. This increase pumps blood all around their bodies so that we can be ready to either fight the wild animal in front of us or run away from it. But in our current lives, the causes of stress have changed - we're not really encountering tigers down the road! We're much more likely to find different challenges and circumstances throughout our day now causing stress. Unfortunately, our physiological reaction to both a tiger or a dangerous driver on the road is actually the same.

There's also a good amount of stress to have, called eustress. You'd experience this if you've ever competed in a sporting event or even if you've taken an exam. Your heart starts beating a bit faster and your mind gets a bit sharper as well. These actually improve our physical performance and our cognitive function but only in the short term and if the stress is resolved. What the issue is now, and what we commonly see long term, is this chronic unresolved stress and this is where the problems can really start to affect our health.

**Victor** And that's the issue isn't it? Short term stress, or eustress, can be beneficial because it's basically a way for our body to survive at that particular point in time. It's chronic stress which is harmful. When does stress becomes chronic stress? Could you outline the impact it has on our body and in particular our immune system?

**Teneille** Chronic stress can have some really serious long-term effects if we don't counter it. It also affects everybody differently. In our modern understanding of genetics and

science, we start to see that our responses to stress are actually individual too. Some of the common signs and symptoms that people may like to consider that indicate their stress is becoming a problem include poor concentration, moodiness, irrational behavior, and forgetfulness. We've all gone into the house put our keys down and forgotten where they are. I think I've even opened up the fridge before trying to look for the bed!

**Victor** We've all done that. We've all been there.

**Teneille** Chronic stress can also lead to a lot of issues with insomnia and sleep. That's also going to affect how you feel the next day and how you function. We see issues with hormone imbalances. People get tired. They start looking for comfort foods as they get stressed. We often see a lot of weight gain particularly around the waist due to the effects of these hormones and cortisol too.

**Victor** We now know that cortisol is a potentially underlying factor why people are not only gaining weight, but also finding it hard to lose weight. Why is maintaining a balanced level of cortisol such an important part of staying healthy?

**Teneille** It is super important. We want to achieve a balance of cortisol, and the levels of cortisol actually change throughout the day. When it comes to our immune system in particular, cortisol is actually essential for modulating levels of inflammation in the body. It also helps to stabilise cells in our body called mast cells. These release histamine, which a lot of us will know around seasonal allergies, when you get that rhinitis and allergic sinusitis responses. It affects both pro-inflammatory and anti-inflammatory chemical production in the body. It's very vital that we get the right levels of cortisol but also at the right time of day as well.

**Victor** What is either too much or too little cortisol?

**Teneille** In the earliest stages of dealing with chronic stress, what we see is an increase in cortisol production from our adrenal glands and also alterations to its levels throughout the day. We call this stage the 'wired and tired' stage. There are elevations in the cortisol levels in the afternoon or evenings instead of in the morning. This can significantly upset sleep. As these high levels of cortisol continue, we can essentially burn out our adrenal glands and become quite exhausted. Our cortisol production can then become chronically low. This is where people will start to feel long term lethargy and fatigue and feel that they can't get out of bed in the morning.

**Victor** Adrenal glands are such an important area. There isn't much pharmaceutical support when it comes to adrenal health. Does cortisol work in isolation or within a symphony of hormones?

**Teneille** Cortisol works in concert with a whole wide range of hormones. If it's high or low, it can affect a wide range of different aspects of our health. It can affect weight gain and stress and cortisol actually alters our fundamental metabolism. This can lead to weight gain, particularly around the abdomen. There's an increased risk of becoming overweight, obese and even developing type 2 diabetes. We've got one person every five minutes developing diabetes in Australia.

It also alters a lot of our other hormones in the body, such as those produced from our thyroid gland, which is our master metabolic gland; our pancreas that produces our insulin to regulate our blood glucose; and the balance of our sex hormones, such as testosterone, oestrogen and progesterone. This can further compromise our hormonal balance.

**Victor** Another area of stress that can be a major issue is the area of inflammation. How might inflammation affect our bodies and what can we do to keep it in check?

**Teneille** Just as we've got an epidemic of stress issues in Australia, and we've got an epidemic of inflammatory conditions. When our stress access response, which we call the HPA axis, is altered, we actually see an increase of inflammation in the long term. Inflammation is a bit of a double-edged sword. It can be both a driver and a symptom of a variety of different health problems. It can be far too easy to reach for some paracetamol or some ibuprofen to manage these issues to get a quick fix. But the relief from those medications is very short lived and they actually pose some significant health risks in the long term as well. Now fortunately with inflammation, we've actually got one of my favourite herbs, turmeric and one of the active phytochemicals, curcumin. This is one of my primary prescriptions for managing inflammation.

**Victor** It's such a wonderful herb, turmeric.

**Teneille** Turmeric and particularly curcumin's active ingredient is not well absorbed in the gut. You've actually got to use a specific curcumin that's got enhanced phospholipid absorption for best results. Curcumin works similarly to anti-inflammatory medications where it reduces the production of inflammatory chemicals in the body. It's a specific one called Meriva curcumin. This is a specific extract and it's been clinically trialed to improve pain, function, stiffness that's common in osteoarthritis and also other inflammatory conditions affecting bones, muscles, skin and even the eyes. It's a herb we can prescribe for a lot of inflammatory conditions, even strokes.

**Victor** In Indian cuisine when they cook a curry, they put in curry powder, turmeric, and cook with either ghee or coconut milk. We know that both of those are wonderful sources of good fats, similar to the phospholipids that are found in the Mariva extract of a good quality turmeric. What are the most important nutrients that a person needs in order to support a healthy immune and nervous system, and to mitigate the toxic impacts of stress?

**Teneille** If we're dealing with someone who's stressed, the first thing to remember is that their digestion is affected. Those people may not actually be digesting and absorbing the nutrients from their food properly, so they're going to need even more support. We need a supplement to top up those nutrients.

If we're dealing with a combination of chronic stress and poor immunity, the key nutrients to think about are vitamin C. It helps with both adrenal function and immune function as well.

Vitamin A is preferable to beta carotene because we know the conversion of beta carotene isn't always effective. Vitamin A helps the health of the mucous membranes lining the respiratory tract and the gut.

Vitamin D3 comes from our sun. Vitamin E is very good for both health stress response and our immune cells. Ubiquinol or CoQ10 and trace minerals like zinc, magnesium and selenium are all supportive of the whole stress nervous system immune axis.

**Victor** I personally think Vitamin C is such an underestimated vitamin. I know that people recognise Vitamin C in the role it plays in immune support. Vitamin C plays such a crucial role when it comes to adrenal health. Are we getting enough Vitamin C in our diet on a regular basis? When you put chronic stress and lack of Vitamin C together, there's potentially a long-term health issue. Can we get Vitamin C from diet alone?

**Teneille** Maybe in a perfect world, with no stress, no environmental toxins, perfectly healthy soil and in a really healthy person, maybe we could get all the nutrients we need. But that's no longer the world that we live in. If we consider the diets that most Australians are eating, they eat what we call the standard Australian diet, also known as the SAD diet. It's called this with good reason. There too many processed foods, lots of preservatives, additives, high levels of sugar and refined carbohydrates. These foods increase inflammation and they steal nutrients from the body to ensure that they can be processed within the body as well. We can't get those nutrients from our diet alone anymore.

**Victor** It's such a sad state of affairs where foods that are so highly preserved with lots of numbers and colours and are so readily available. Unfortunately, they're also very cheap, so people access those foods more easily.

On the other hand, we have such a plethora of fresh options: fruits, vegetables, and great protein sources such as grass-fed meats. Amino acids from the proteins in those meats play a crucial role when it comes to stress and the nervous system especially with tryptophan.

Your Naturopaths Kitchen has recipes you can look up, which combine all these fresh ingredients into great tasting food that you nourish the body, nervous system and immune system.

**Teneille** I'm a huge foodie, so I'm all about creating health with fabulous food not boring health food. It's got to be tasty or you're not going to want to go there.

**Victor** Beyond food, are there certain supplements - whether they're nutrients or herbs - that can support a person who is affected by chronic stress. How can these help?

**Teneille** For managing stress, I like to include a wide range of nutrients that nourish the adrenal glands, such as Vitamin C. Most people won't be aware that vitamin C accumulates within the adrenal gland and we need it to synthesize or manufacture our stress hormones from the adrenal glands themselves. The Vitamin C dose is very important when it comes to any nutrients. Research shows that a 1,000 milligrams or one gram of Vitamin C taken three times a day helps to reduce elevated cortisol levels. It is a fundamental part of managing stress and adrenal health. Vitamin E also helps to protect the adrenal gland from damage.

I'd also add B vitamins and trace minerals. These compounds are important for supporting cellular energy production and our nervous system. There are also co-factors in the enzymes needed for different hormone production, so it helps that balance.

From a herbal perspective, I like to use what we call herbal adaptogens. These herbs help to minimise the negative effects of stress within the body. These are herbs such as withania, which has a long history of use in ayurvedic medicine.

There is a specific extract in withania, called KSM-66. This particular extract has data from clinical trials that shows it helps to reduce the stress hormone cortisol, so people feel less stressed. Interestingly it also helped to reduce people's food cravings, and improve their weight loss, (compared to a placebo). This can also be complemented with other herbs that help the adrenal gland in stress response, such as eleuthero coccus, known as Siberian ginseng.

Herbal licorice root also helps to support adrenal function and reduce feelings of stress. One final herb that most people won't think of for stress - they'll probably think of it for a immune system health – is echinacea. Nearly every practitioner we speak to absolutely loves echinacea, but it's got a dual benefit for this group of stressed individuals who also need immune support. Echinacea is actually an immune system modulator and helps to

balance the nervous system. This species *echinacea angustifolia* and *purpurea* from the root contain compounds called alkaloids. These are constituents that are found in the blood when you take echinacea orally. These compounds influence our stress response via a system that's intricately involved with the HPA system, called the endo-cannabinoid system. This is a newly identified way that echinacea interacts with our stress response.

**Victor** How can stress affect our gut health?

**Teneille** We've got one of the longest nerves in our autonomic nervous system called the vagus nerve. It runs from our brain to our digestive system, and to our heart and our lungs. It's highly affected by stress. Under chronic stress it changes the signaling to the digestive tract.

For those who are chronically stressed, the signaling between the brain and the gut by the vagus nerve alters the production of our digestive secretions such as bile. It also affects the movement of foods through the digestive tract. It will affect our ability to digest properly and absorb our food when we're stressed. Of course, this will have an effect on our nutrient status and subsequently our immune system as well. We have special nerve cells in our digestive tract called glial cells. These reach into our digestive tract, and taste or sense what's going on and tell our brain what's going on. It can then initiate an immune response - if there's a gut infection or inflammation it can respond to that. This helps to regulate the health of the digestive tract, brain and the immune system. These glial cells can be adversely affected by chronic stress as well.

**Victor** Can probiotics play a role in boosting immunity particularly when someone is affected by stress?

**Teneille** Absolutely. They play a vital role. Did you now know there are more bacteria living within our gut than we have cells in our bodies? The question is, are we more bacteria or are we more human? Again, this is a bi-directional relationship. They affect us, we affect them, and it can be a mutually beneficial arrangement.

In certain people, the gut bacteria become disturbed. We've seen a huge expansion in research into what we call the microbiome. This is essentially the bacteria that live on and within us, as well as the effects of probiotics. We're looking at how certain strains of probiotics impact us in our health and how we impact them. Probiotics have been known to impact gut health and benefit health issues such as irritable bowel syndrome (IBS), constipation and diarrhoea.

We're now saying that it helps to support healthy immune function. When you understand that a large portion of our immune system is found within the digestive system, it starts to make sense that gut health and the balance of the microbiome and probiotics can impact our immune system.

Research has shown there are strains called Bifidobacterium infantis (R0033), lactobacillus helveticus (R0052) and Bifidobacterium strains. This combination, when taken together by children reduces the rate of their winter respiratory tract infections when taken for at least three months.

We're now moving into the realm of what we call psych biotics. This is where probiotics exert influence on our nervous system. Two specific strains - lactobacillus helveticus (R0052) and Bifidobacterium longum (R0011) might be of benefit to those who are stressed. If you take these together for a period of 30 days, we see a reductions in levels of the stress hormone cortisol. We also see improvements in their levels of anxiety and other mental health parameters. Essentially these specific probiotics can look after our digestive health, look after our stress response, look after our nervous system and look after our immune systems as well.

**Victor** Can you give us an overview on how people can learn to react to stress in a healthy way?

**Teneille** I think it's really important that we support our patients to learn how to manage their stress. For me, I have to have a focus on exercise and I'm sure you'd agree.

**Victor** Oh very much so.

**Teneille** This helps people to cope with stress very effectively. People don't have to go out and run a marathon in my opinion. You never see a smiling runner. People have to find something that they like. Getting out in the morning is important. Getting some sunshine is perfect. For me, it's paddle boarding up here at Noosa. You know I'm immersed in the beautiful surrounds, nature, dolphins, there's stingrays everywhere. It's almost a moving meditation going paddle boarding.

Diet is essential. Take pro-inflammatory foods out of your diet, such as coffee, high sugar caffeinated energy drinks.

**Victor** Coffee, no we can't ban coffee though.

**Teneille** People can metabolise it effectively if they're not in adrenal exhaustion stages, then a little bit of coffee is okay. Lots of green leafy nutrient rich veggies, non-farmed wild caught seafood that's rich in omega-3, and avocados. These good fats are nourishing for our nervous system.

People need to get to know what triggers them. They're different for everybody. If someone feels they're too busy, they need to stop saying no to a couple of things every

day, or perhaps consider working on time management. If it's financial stress, then seek some professional support for managing the budget.

If you set up a plan for how to deal with stress triggers, you're less likely to feel pressured and that weight will be lifted from your shoulders.

It's absolutely essential we need to practice healthy sleep hygiene. Take technology out of the bedroom. Get the TV out of the bedroom. Shut down your phone an hour or two before bed and make your bedroom a sanctuary for rest and relaxation. I actually like to use guided meditations to fall asleep as well. One of the most beneficial things to do is use relaxation or meditation techniques. These can be as simple as closing your eyes, focusing on your breath, slowly inhaling, holding that breath for a few seconds, then exhaling. Mindfulness and yoga are really great for stress too.

People need to take a few of those things and start incorporating those into their days to help mitigate the toxic effects of stress in their lives.

**Victor** The good news is that you know if you're not able to get the best, or most perfect diet, then we have appropriate supplements available. These can support all the areas we've spoken about: nervous system, stress, adrenals, immune function even digestion. We have so many options available to us. Thank you Teneille, for taking us through this very important topic of mitigating stress toxicity and immune function.

**Teneille** My pleasure.

**Victor** And we encourage you to consult with your health care practitioner for advice on whether supplements are suitable for you. If you've enjoyed what you've heard today we'd appreciate you jumping onto iTunes to provide us with a rating and a review and if you have a topic the you would like us to cover, we want to hear from you. Get in touch with us

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