



The Athena Wellness Podcast  
Episode 087 – Fortifying Practices That Can Strengthen Your Immune  
System with Dr. Robyn McIntyre  
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00:05

Welcome to the Athena Wellness podcast, the show that invites you to take a seat around the community fire and listen to stories that inspire. I'm your host, Kathy Robynson, author, coach and founder of Athena Wellness, a company that's dedicated to supporting you on your journey to live more wholeheartedly.

00:30

Hello and welcome to Episode 87. Thanks so much for joining me.

Today I'm joined by a good friend of the podcast, Dr. Robyn McIntyre, a New Zealand and Australian trained family physician, mental health counselor and public health practitioner. Since moving to the US, she's also become a certified health coach and now focuses on behavioral change to optimize health and well-being.

For our discussion today, Dr. Robyn draws on over 30 years of medical training to give us a masterclass on the immune system and shares her views on how to keep your immune system functioning well. We then talk about lifestyle strategies to enhance your wellness, focusing on physical activity, healthy diet and sleep. I've linked up Dr. Robyn's website, [DrRobynHealthCoach.com](http://DrRobynHealthCoach.com) that includes a contact form in the show notes.

And now onto the show. I hope you enjoy the conversation.

Kathy

Dr. Robyn, welcome back to The Athena Wellness Podcast. Thanks so much for being here today.

01:42 Robyn



Thanks, Kathy. It's great to be here again.

01:45 Kathy

You joined us for a wellness conversation back in Episode 21 and here we are seven months later and we're dealing with many of the things that we discussed back in the springtime. In addition, in the northern hemisphere, we're getting ready for the winter season, which we know can bring outbreaks of the flu. So it felt like it was a good time to check in with you and to get some context and some actionable steps that we can take to keep ourselves well.

For the newer listeners, maybe we can start with sharing a bit about who you are and what you do.

02:22 Robyn

Well, I am a New Zealand trained family practitioner, with a master's degree in public health. And I usually work in Australia, but for obvious reasons, I haven't been able to do that for a couple of years.

I've always had a very strong interest in lifestyle medicine and how we can implement changes in our lives to keep us healthy. And so I've really been going down that path in the last couple of years. And I'm now doing health coaching, which I'm just loving. I just believe so strongly that we can have an enormous impact on our health by the way we live.

03:03 Kathy

Mmhmm. Perfect. So one of the things that we wanted to share with our listeners today was this idea that there are things that we can do to keep ourselves well in such challenging times, that we can be empowered.

So let's start with our immune system and talk about it at a macro level. Can you share a bit about what the immune system is and why it's important to keep it functioning well?

03:29 Robyn

Sure. The immune system has always fascinated me. I think in the years since I was at medical school, there's been a lot of knowledge developed about it. And we could get



caught up in some details, which I think are probably unnecessary, to get an overall feeling for just how important it is.

I mean, the first thing to understand is that the immune system is just that – it's a system. It's complex and has many different parts and approaches that are intertwined and interwoven.

Basically, the system in our body fights germs and foreign substances on the skin and the tissues of the body, and in the bodily fluids, such as blood. It's got two main parts. There's the innate, or general immune system, and then the adaptive, or specialized immune system. And these two subsystems work closely together and take on different tasks.

So if we just have a general think, first of all, about the innate immune system. This is the body's first line of defense against germs entering the body. It responds in the same way to all germs and foreign substances, which is why it's sometimes referred to as the nonspecific or general immune system.

So that's good and bad – it acts very quickly. So for instance, a bacteria that has entered the skin through a small wound can be detected and destroyed within a few hours by the system. But it only has limited power to stop germs from spreading. So it's not as strong, if you like, or as efficient as the adaptive immune system.

It consists essentially of three parts. The first part of the innate immune system is the protection offered by the skin and the mucous membranes. Now, mucous membranes include the cells which line the organs of the body, for example, the whole of the digestive system, including the mouth and the esophagus and stomach and further down, the respiratory system including the nose, the windpipe, the lungs, and also parts of the genitourinary system, including the ureters, which connect the kidney to the bladder, the bladder itself, and then the urethra, which is the connection between the bladder and the outside. Those are all mucous membranes.

So the protection works in two ways. There's a physical barrier to the germs, which uses chemical substances, like acid or enzymes, which are a type of protein, or mucus, which prevent bacteria and viruses from entering. Movement is also important. So we have hairlike structures called cilia in the lining of the breathing tubes and also the muscles of



the bowel wall move. And then there are also fluids like tears, sweat and urine, which flushes the organs of the urinary tract. And all of these stop the germs from settling in the body.

Now, if the germs get past the skin and mucous membranes and into the body, so this is the second part of the immune system, the innate immune system. This process is called infection. And the innate immune system activates special immune system cells and also proteins, which are enzymes, which start a chain reaction of protein release that quickly escalates the response.

So when you get a part of the skin infected by a bacteria, you get a side of inflammation, we all can recognize us. This happens because our immune system cells move to the area, or are already in the area, and become activated. Those specific immune system cells release substances into the immediate area that make the blood vessels wider and leakier. So this causes the area to swell, to heat up and redden, and inflammation results.

Then you have scavenger cells, another sort of cell, which goes in, digests the bacteria, and other cells release substances that kill the bacteria. All of this produces what we know as puss, which is dead bacteria and also dead body cells. So that's the second part of the innate immune system.

And the third and final part of the innate immune system are the natural killer cells. They specialize in identifying cells that are either infected by a virus or have become a tumor. And a tumor is just cells that are out of control, which is cancer. To do this, they search for cells that have changes on the surface and then destroy the cell surface using toxins. So that's the innate immune system.

If we then look at the adaptive immune system, it takes over if the innate immune system is not able to destroy the germs. It responds less well with age, although in recent years, it's also being realized that the innate immune response is also affected by aging. And this is part of the reason that older people are more vulnerable to infections, and vaccines, they're not as effective and older people.



The adaptive immune system specifically targets the type of germ that is causing the infection, and it's therefore more accurate. But it first of all needs to identify the germ and this means it responds more slowly than the innate immune system.

It has the advantage, however, of being able to remember germs. So the next time a known germ is encountered, the adaptive immune system can respond faster. This memory is also the reason why there are some illnesses you can only get once in your life because afterwards your body becomes immune. And this, of course, is the principle of vaccination, the body has a memory of that particular germ and therefore mounts an immune response very quickly.

The adaptive immune response is made up of a variety of cells, which I'll just quickly mention without too much detail. The T-lymphocytes are a type of white cell that is found in the tissue between the body cells. And these help activate other immune system cells of the adaptive response to detect and destroy cells infected by viruses or tumor cells. And some of them become memory cells ready to respond quickly, if that germ attacks again.

The second type of cells are the B-lymphocytes, also found in the tissue between the body cells and these produce specific antibodies or proteins for attacking the germs. Some of these also transform into memory cells.

And then we also have antibodies, which circulate in the blood and other bodily fluids. These are compounds of protein and sugar that are created by the immune system to fight germs and foreign substances. Antibodies can quickly detect germs and other potentially harmful substances and then attach to them. This neutralizes these intruders and attracts other immune cells to help kill them.

So that's perhaps a bit more detail than people might want.

11:36 Kathy

That was a master class, Dr. Robyn! I was like, you know, in my biology class in high school, I don't think we got that level of knowledge. But just in hearing so many of these terms in the news over the last couple of years, it really puts it in context of - there are these systems that are protecting us on multiple levels.



11:59 Robyn

It's fantastic. I've always thought our bodies are amazing. And they're so good at so much of what they do if we just let them be good.

12:07 Kathy

Right, exactly. And to that point, there are things that we can do from a lifestyle perspective. You know, lifestyle plays a part, I guess, at least from my perspective, but tell me from a more medical perspective.

12:23 Robyn

Absolutely, lifestyle plays an enormous part. And, if you like, this is a third part of protection that we can put around ourselves. I think we also need to think in terms of what we choose to do generally makes a difference. We know now that wearing masks and hand washing is enormously protective from germs in our lives. We know that not smoking is a choice we can make if we want to be healthier. And if we do drink, that we only drink alcohol in moderation.

And then you have people like me who are in contact with a lot of germs in their jobs, a lot of people with influenza, for instance. So I get influenza vaccinations every year to protect me and teachers, probably, and other people in service industries are very vulnerable.

I think also another area that people have some control over, even if they don't exercise it well, is finding ways to minimize stress. Because we know the stress response actually suppresses the immune system.

13:31 Kathy

You know, maybe we can move into some of these strategies that can keep us well. I love this idea of these three layers of protection. One of which, as you said, is lifestyle and the choices that we make.

And so when we were talking about possible topics for the podcast, we settled on physical activity, healthy diet, and sleep. And so maybe we can talk about some of the "what," for context, even though we're well aware of some of the things that will keep us healthy, but really focus on strategies to help listeners with the "how." That sound okay?



Robyn  
Sounds great.

Kathy  
So let's start with physical activity. Can you give us a high level thumbnail, almost like a framework, that we can operate in for the discussion?

14:21 Robyn  
Sure, happy to. I think if we think about the benefits, I mean, in addition to supporting our immune systems, what are the benefits of physical activity? And these are increasingly becoming clear.

We know that physical activity helps relieve stress and depression, almost as effective as antidepressants for many people who have depression. We know that it's important to stay physically strong to prevent falls, which can lead to premature deaths, particularly in older people. We know that physical activity improves our brains, our cognitive function, and it provides many diseases, including cancers, heart disease, high blood pressure, diabetes, Alzheimer's, anxiety and depression, as I just mentioned.

We need to think about exercise before medication in many instances, but conventionally, we as doctors tend to direct people towards medication, because frankly, it's often easier.

So what are the guidelines? I think the guidelines are important, but we also just have to think about moving in our lives. The current guidelines suggest 150 to 300 minutes each week of moderate exercise, or half that, 75 to 150 minutes of vigorous exercise. And we define moderate intensity exercise as an exercise in which you can talk, but not sing...  
(laughter)

15:59 Kathy  
What if you can't sing it all? (laughs)

16:02 Robyn  
Or groan perhaps? (laughs)



Whereas vigorous intensity, you cannot say more than a few words at a time. So running along with your running partner, gasping. (laughter)

However, the more exercise we do, leads to even more benefits, we know that, up to a certain point. And the components of the exercise, the two main categories are endurance or cardio, where we move large muscles in a rhythmic manner for sustained periods. So for example, swimming, dancing, running, brisk walking, cycling – this gets an increased heart rate and makes you breathe harder.

And then the second category is muscle strengthening for all major muscle groups, legs, hips, back, chest, abdomen, shoulders, and arms, at least two days per week. And this strengthens our bones and muscles and helps those to not diminish with age, which is very important.

17:09 Kathy

You know, you bring up a good point of “why” we’re exercising. So you mentioned a whole bunch of reasons. One could just be for mental health, getting outside, just having a break. One might be for disease prevention. One could be for training and doing something more physical.

And the reason why that’s important is that you get to adjust the intensity. So for somebody who’s not a fan of exercising, taking a walk might be just fine. If you’re looking for a mental boost, if you’re looking for disease prevention, rather than thinking, well, the only way that I can really exercise is going to a gym and I don’t like going to a gym, therefore, I’m not doing anything.

So do you agree with trying to identify the purpose and then fitting in the type of activity based on your goal, which is what you’re trying to achieve, as well as what you like to do?

18:11 Robyn

Absolutely. And I think you’re absolutely on the ball when you say, “Something we like to do.” Because it’s not sustainable unless we enjoy it. I sometimes think we get too caught up in the finer points of exercise. And really, we just need to move and doing a 30 minute walk five times a week is more than adequate to maintain health and reach these goals for most people.





18:39 Kathy

Yeah. So the next thing we were going to talk about was a healthy diet, the importance of a healthy diet. So again, for a little bit of context, would you like to give us a little 101?

18:50 Robyn

Sure. And I mean, diet has become quite a controversial area. The subtleties of a healthy diet are constantly evolving. And it will probably always be about fashions and fads with diets. But I don't think that's actually a bad thing, because it shows that people are interested and concerned. And we learn from all of those different patterns of eating.

I think that we can make some statements, though, about diet. We know that what we eat is the main determinant of body weight, unless you're doing a really extreme amount of exercise. Basically it's what determines if we're overweight, and being overweight is not good for health and immunity.

I think we can also safely say, and there's consensus in the research and amongst the experts, that a diet of minimally processed foods, comprised of mainly fruits and vegetables, is optimal. Patterns of eating are also receiving a lot of attention these days. It's clear that periods of not eating are good for us physically, because that allows time for the digestive tract to undertake its other functions, like regeneration and repair. And ideally with a minimum of 12 hours per day of rest and 12 hours per day eating, that's a minimum of 12 hours per day resting.

Because we're talking about our immune system, I think it's also worth noting that there's a form of malnutrition surprisingly common, even in affluent countries, known as micronutrient malnutrition, and that impairs our immune systems. Micronutrient malnutrition, in which a person is deficient in some essential vitamins and trace minerals that are obtained from or supplemented by diet, can easily happen in the elderly. Because older people tend to eat less and often have less variety in their diets. They're often quite set with the foods that they eat.

So one important question is whether dietary supplements may help everyone, but especially older people, to maintain a healthy immune system. And older people should probably discuss this question with their own doctors.



21:13 Kathy

Yeah, I think we both agree that incorporating more whole foods and minimizing processed foods is a great idea. What are some strategies to be able to do that?

21:24 Robyn

Sure. I mean, I think simple things like eating brown rice instead of white rice or or whole grain breads. I love this little trick that I learned from Dr. Rangan Chatterjee, reading labels and having no more than five ingredients on the label of the foods you're buying, will reduce the chances that it's highly processed. That keeps it simple, because those labels are complicated.

Obviously, keeping away from preservatives and additives like coloring. And then avoiding processed sugar and sugar substitutes, if possible. For example, diet drinks, which have artificial sugars which disturb our metabolism, and ironically, actually increase the chances of developing diabetes because they increase insulin resistance.

If you can, organic fruit and vegetables, although it can be expensive and they often don't last very long. But even if you just buy organic for the Dirty Dozen, have you heard of the Dirty Dozen?

22:29 Kathy

Blueberries, strawberries, the things that have no or thinner skin? Is that fair?

22:35 Robyn

I think that's fair. And because you can't wash the pesticides off them very well. So yes, strawberries, lots of the greens, spinach and kale and collard greens. Actually even apples and grapes and nectarines and peaches are in there, bell peppers and hot peppers, and celery and tomatoes are all things that come in there.

And, of course, winter is the time for comfort foods but if you're going to have comfort foods, I always think go for a tomato sauce rather than a cream source for health. I use an air fryer quite a lot now for vegetables where you can use little or no oil and I think that you can also pan fry in stocks as well, rather than using oils.



Vegetable lasagnas, shepherd's pie using lentils, ravioli with spinach, squash soups, lots of soups. You could hide a lot of vegetables in soups. And then I've discovered eggplant, which can be very solid and great in things like moussaka. Using nutritional yeast instead of cheese to reduce dairy. And then I make homemade muesli, which goes down very well in my household. It's got lots of fiber and long lasting energy and having it with nut milk.

23:58 Kathy

Mm hmm. Let's get into our third topic, which is sleep. You want to give us a little tutorial on sleep?

24:06 Robyn

(laughs) Sure. Well, I mean, there's great information out there from many sources. There's consensus in the fact that this may be the one single most important health improvement we can make, having enough good quality sleep. Because we know that even one night of bad sleep can sufficiently impair the immune system that an infection can take hold.

We've got to remember there are different stages of sleep with REM or rapid eye movement sleep later in the night. And it's important to stay asleep long enough to get that full range - we need a good sleep to function well. This can affect our ability to learn and absorb information or concentration the next day.

It's also normal to wake up many times during the night as we pass through those different sleep stages. So the only concern comes when we can't get back to sleep.

The amount of sleep we need in our lives will change over time. We might be night owls who cannot wake in the morning as teenagers. But we can become morning people as we age. And we need less sleep in summer, but longer in winter.

I think oftentimes people really don't realize how much sleep they need and whether they're an owl or a lark, whether they like staying up late or getting up early, until they can break down some of the social constraints around their sleep. So a camping trip, for instance, is often a good time to find out what you really are.

I was really interested to learn that the half life of caffeine is four to five hours. So that means five hours after you've had a cup of coffee, you still got half the coffee left in you.



And five hours after that, you still got half of that half. So you've still got a quarter of that cup of coffee in you 10 hours after you've had it. And that's why the midday no caffeine rule tends to work for us as we get older.

There are many different things that we can do to improve the quality of sleep, some of which I'm better at doing than others. Avoiding bright lights at night, especially bright overhead lights, between 10 o'clock at night and four. If we see bright lights then apparently it disrupts our circadian cycles. And if I get up in the night, I'm always trying to just put on the softest light I can to not wake me up too much.

Another issue too, of course, for all of us, is screen time and not looking at our screens too close to bedtime. I actually discovered that I have a nightlight on my phone last night when I was doing some research for this talk and that's got a more amberlight, which is supposed to be better. Although I think the evidence out there is that even screens on devices is not enough to reduce the stimulation we receive from screens at night. So we need to stop our screens three hours or so before bedtime. I certainly sleep a lot better if I read before sleep, as opposed to doing something on my phone.

The other thing that makes a big difference for me is if I'm too hot at night. And, of course, menopause and perimenopause hot flashes, people will know that heat that you get wakes you up. So we actually have to have temperatures that are one to three degrees lower than our body usually has to fall asleep and stay asleep effectively. That's why turning down the temperature at night can help you with sleep.

27:46 Kathy

So is there an optimal temperature?

27:49 Robyn

Well, the optimal temperature apparently is about 65 Fahrenheit.

27:53 Kathy

Oh my, yeah, that'll never happen in my house. (laughs)

27:59 Robyn



(laughs) It doesn't happen in our house, either, but I think I would sleep a lot better if it did. One of the things that I am going to try and do also is make sure I get outside within half an hour or so of waking up, presuming it's daylight, because that also helps your circadian clock. And where I live there's bright sunlight. So even just going outside briefly is enough. Some places you need longer to do that.

28:26 Kathy

Well, we've certainly learned a lot about boosting our immune system. We've talked about the three biggest contributors and things that are in our power to change.

But how do we bring all of this together? It can be overwhelming to think about all of these different things we *can* do. How do we decide on what we *should* do?

And so one of the things that I wanted to introduce was this idea of a decision tree. It's something I used when I was in corporate, when I was traveling a lot, when I was under a lot of stress. Rather than giving myself this level of perfection to attain, it was more what could I do in the moment.

So whether it was what I was having for breakfast, whether or not I was going to exercise during the day, what time I went to bed -we have thousands of choices we make during the day and we make them without giving them much thought. It's the next thing, right? It's the next meeting that we have, it's the next thing that we need to do.

So what is it that we can do in each moment to the best degree that we can without beating ourselves up over it? That was one of the main things that I tried to incorporate back in those days. How does that sound, Robyn?

29:38 Robyn

That sounds really smart to me. I mean, we've got to be realistic. We're so surrounded by inputs that we can measure ourselves against and judge ourselves harshly. And I think we just have to do what we can do - do our best and the moment.

I think if we want to make changes, we have to think about making gradual changes, most of us, anyway. And we might not feel like we're getting anywhere, but a lot of small gains will add up eventually to successes. So acknowledge the gains rather than the



failures. I think most of us are too ready to criticize ourselves and not acknowledge the things we are doing right. And certainly do not compare ourselves to others. Often, if we're looking, for instance, at social media, we're only seeing the best of people.

And imperfection is okay. We can get it wrong. We learn from making mistakes. They do say, if we're not making mistakes, we're not taking enough risks and stretching ourselves. So be kind to ourselves, encourage ourselves and just do the best we can.

30:46 Kathy

That's wonderful. I think this is like a permission slip. And I agree with the experimentation and also having some fun with it. And just learning and making adjustments.

I mean, everything that we've talked about, we've learned about ourselves, and we're making little adjustments as we go forward. And in a year, when we have a follow-up conversation, there'll be more things that we've learned during the year that we've incorporated.

I think if we approach our health and our wellness in that way, not only is it more of a fun journey, but I think it's just more supportive. And you said the word kind. You know, we learned to be kind to ourselves and support ourselves and encourage ourselves along the way. I think that's certainly a recipe for success.

31:31 Robyn

I agree. I think that sounds like a smart approach. And if we're persistent and believe in ourselves, we'll get there.

31:40 Kathy

Absolutely. Well, Robyn, I thank you very much for sharing your insights. What's the best way for our listeners to get in touch with you?

31:47 Robyn

Well, I have a website which people can contact me through. It's [DrRobynHealthCoach.com](http://DrRobynHealthCoach.com). So I'm contactable there.

32:06 Kathy



Very good. I'll put a link in the show notes. And thank you so much for joining us today. I really appreciate your time.

32:12 Robyn

Thanks, Kathy. I really enjoyed chatting.

32:17 Kathy

Thank you so much for joining me today. I know there are many ways you can spend your time. Thank you for choosing to spend it with me. Until our paths cross again, be kind to yourself and show your Warrior Spirit some love.

If you know anyone who could benefit from today's episode, please pass it on. And many thanks for supporting the show by subscribing and leaving a review. It means a lot and it helps others find their way to our circle.

If you'd like to access the show notes, have a question you'd like addressed on a future episode, or would like a transcript of this episode, visit [www.AthenaWellness.com/podcast](http://www.AthenaWellness.com/podcast).

Until next time, be well!