

FUTURUM PODCAST

Dr. Anthony Peters

Dr. Anthony Peters is a cardiologist at **Wake Forest University School of Medicine** in the US, where he is investigating how exercise can help older patients with heart failure. In this podcast, he discusses the importance of pursuing a career that you enjoy and shares how his research enables him to help others.

Break the podcast down:

00:57: Hi Anthony, welcome to the Futurum Careers podcast. How are you today?
I'm doing great, thanks for having me, Joe.

So, I normally start these podcasts with three quick-fire questions just so our listeners can get to know you a little bit better as a person. The first question is, what's your favorite sport?
My favorite sport is soccer. I grew up playing it and still love to play or coach a little bit, at least for my kids, and I follow it on the club and the international level.

Cool. The next question is, if you could travel back in time to anywhere, where would you go?
I don't know, I don't think about that a lot! I think I'm a good fit for the current age. Maybe I'd just travel to see my parents or grandparents when they were younger, and get to know them then.

Nice, that's a good answer. And the last question, if you could be any animal, what animal would you be and why?
Another one that I don't think about a lot! You know I love dogs and yeah, I love their temperament and energy and their relational aspects. So yeah, maybe I'd be a dog.

02:03: Now we'll get stuck into some questions about your research. You're a cardiologist and you're studying how exercise therapy can help patients with a specific type of heart failure called heart failure with preserved ejection fraction, or HFpEF. So, could you give our listeners a brief overview of what HFpEF is and how it affects patients?
Sure, so as you said, I'm a cardiologist. I'm a clinician and a researcher. I love seeing patients in the clinic in a hospital and then I run a research program alongside that where I get to ask and answer questions that the field doesn't necessarily completely know the answer to right now, with the goal of improving care, whether that's diagnostics or interventions, therapies for patients.

I do specifically focus on patients with heart failure. Folks with low pumping functions, so the opposite of what you were talking about – heart failure with reduced ejection fraction – and then also focus on patients with preserved ejection fraction. And it's about a 50-50 split in heart failure between those two types. That group of heart failure with preserved ejection fraction, or HFpEF, is growing. It is related to things like aging, things like cardiometabolic disease, whether that's diabetes or obesity, so super common here in the US at least. It's over 6 million Americans with heart failure, close to 7 million actually, and over half of those having HFpEF.

Heart failure with reduced ejection fraction I think we've known about for a little bit longer. It's a little bit easier to see and find. Obviously, it's just the heart squeezing less strongly and it's easy to measure. And along with that, a lot of drug therapies have been studied, tested and proven for patients with heart failure with reduced ejection fraction.

HFpEF on the other hand is something that we've learned about over the last several decades and have struggled more to find good therapies for. It is a complex systemic condition. I think when we first found it, we were just noticing patients with these heart failure symptoms of shortness of breath, but the pumping function was preserved and so we started to notice that that heart muscle was stiffer. And so, traditionally it was really thought of as a stiff heart condition where the heart wasn't filling properly. We now understand it as a systemic condition where that stiffness in the heart is part of it but there are changes throughout the body – kidneys, lungs, vasculature and also the muscle itself.

04:32: You mentioned there that it's been more difficult to find therapies for HFpEF. Is that still the case or have things begun to change? And how is your research looking to help change that?
Past few years, there has been a little bit of a turn there. So, a couple of drugs are now known to be effective for HFpEF but really before that, exercise training – dedicated supervised trainer-guided exercise training – was the only thing we knew that helped for HFpEF. And so, a lot of my work currently looks at next generation forms of that exercise training. So, exercise training, an incredibly effective intervention for HFpEF, probably one of the most effective and the only one that definitively improves folks' ability to exert themselves but limited by a number of factors.

There's still many patients with HFpEF that don't respond to that standard traditional supervised exercise training. Additionally, most of the studies so far have looked at short-term outcomes but those exercise habits and clinical benefits are hard to sustain and retain over time. And so, another thing that BOOST looks at are ways to really embed lifestyle changes and exercise into folks' lives and make it more sustainable and therefore the clinical benefits durable.

05:51: It's interesting. It sounds like there's a bit of crossover with sports psychology or that kind of thing. How do you actually convince people or encourage people to stick to those habits? Is that something you look at in this trial or are you just looking at the effects of if they do?
Yeah, that's a great point. So, the psychology part I think is about behavior change and what that means for patients and how that happens and how it's sustained. So, I'm partnering with behavioral specialists and that's part of what we do with the BOOST program is motivational interviewing, one-on-one sessions and group sessions as well.

We're excited about that group component too. I didn't mention it too much so far but really all the traditional rehab and exercise work has been mostly one-to-one but we think that the group environment might provide social benefits both on the short term but then also potentially on the long term in terms of having partners for continued exercise habits too.

06:50: Now I want to talk a little bit about what led you into this career. I know that your parents worked in healthcare. So, do you think that that had an impact on you and the trajectory of your career?
Yeah, absolutely. I think in example-based ways from a young age, I saw the work ethic of my mother and father and saw their drive to help people, whether those are patients or outside of the medical field. When given opportunities and privileges to try to give back and I was drawn to the medical field as the best method for me to help people and I was really drawn to helping patients. So, I have loved doing that from a clinical standpoint and getting to see patients and have that honor and then trying to answer bigger questions through research.

07:43: And talking about research, how can students who are interested in this kind of work find opportunities to take part in research and to gain that kind of experience?
I think it really depends on career stage or age stage or education stage. So, I think early on, obviously shadowing is the clearest way to get exposure to the medical field. And really that's finding maybe somebody in your family or community network. I think that's a great start early on, whether that's in the middle or high school stages. But I think even then and certainly if moving on in education through undergraduate or further education, starting to think of questions that are exciting for you or problems that are exciting for you and small tangible ways to address those problems. So, whether that's a really scientific question like some component of understanding HFpEF physiology or whether it's more health-based but community-based problems. So, access to healthy food in a particular neighborhood is a really specific and tangible and targetable even from a young age problem.

So, I think those would be the two things I'd mention thinking about. Shadowing-based experiences to see about how your job is done or what patient care is like, what research is like. And then trying to think about what kind of questions are exciting to you because I think that's the fun part of this – the creative part to a medical science career, asking questions and then trying to answer them.

09:16: That touches on my next question which was going to be about how, in the Futurum brochure, you gave some advice saying that students should pursue what brings them joy and what excites them. I was just wondering why you think that's such an important part of this career?
Any career when you're trying to make an impact, I think there's going to be challenges and there's certainly challenges and drawbacks to a medical career or to a medical researcher career too. Those drawbacks start to feel like just a little stumbling box if it's really something that you're passionate and excited and that brings you joy. And so, I found that too as I've popped between different components of a healthcare career, the parts that felt more like a drag to me or the parts that were really exciting and I was excited to work out. And so, yeah there'd be stumbling blocks and drawbacks to anything. And so, I think finding something that excites you will make those minor and surmountable.

10:12: Talking about stumbling blocks and drawbacks, have you faced many challenges throughout your career and if so, how have you overcome them?
Yeah, plenty of challenges and sometimes setbacks or disappointments. I think overall, it's a little bit of a longer haul maybe compared to other careers to get to this, the final point. And so, I think one of the challenges was a little bit reframing it as simply an ongoing career. It's not just education and training to get to the end but rather embedding career-based stuff like research questions and research work even early on. Balancing that education and training with family and personal life and not just putting that all off to the end.

I think the medical field here in the US and maybe throughout the world is evolving too. And so, I think even in just my 10 years of education and training, things have changed and those changes and that evolution have been a challenge as well because in the beginning, your plan is not, you just have to evolve along with the evolving industry.

Yeah, you have to adapt as the landscape shifts, you have to be a little bit flexible. If you've got a perfect plan, it might not always go that way, I guess.
Yeah, exactly.

11:35: So, do you have any final advice for students who are interested in this kind of career? Anything that you haven't mentioned yet that you think will be useful?
Like I said, it is one of the most fulfilling careers to pursue and I would be so excited and supportive of folks looking to pursue it. There are drawbacks and challenges like I said to any field and there's certainly those here. So, I think I mentioned asking lots of questions and getting lots of exposure and experience early on will clarify what gets you excited, what brings you joy and what will be the best fit for folks hopefully in this medical and healthcare field. But there's tons of different opportunities and parts to it, so lots of opportunities for anyone based off their interests.

12:25: Cool. You just you mentioned there about the motivation to do it is helping people and that helps you overcome those drawbacks and those challenges and makes them worth it. Could you maybe share a moment or something that has happened where you've had that moment of, 'Oh okay, this is worth it!', one of those moments where it's really clicked for you?
I don't know if I have one moment that sticks out like that. If there's anything, it would just be those many moments with patients where the depth and breadth of my training really enables me to have that conversation really well, both to connect with patients but understand and explain things scientifically and then be able to offer what we have plus a little bit more. So that's these clinical studies or clinical programs or BOOST or the many others that we run. So, there's many moments like that. We're sitting with patients where it does feel worth it, I guess as you said because of how I'm able to engage in that conversation, connect with patients and then offer that little bit extra.

13:33: It's interesting you mentioned the connection with the patient as being one of the key things because it's like what we were talking about at the start, about these group exercise regimes where it's that social connection that might be just taking it that little step further. So yeah, that's interesting to hear.
Yeah, absolutely. I think that connectedness is throughout, let's say on the career and then also for patient care and these lifestyle changes too.

Yeah, awesome. Well, thank you very much, Anthony. It's been lovely chatting with you. Thanks for joining me.
Thanks, Joe. I really appreciate it.

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