

00;00;00;00 - 00;00;28;03

Cale

Welcome to Grin + Bare It. A show that uncovers the remarkable stories from one of the most demanding industries in the world — Healthcare. From inventors and trailblazers to frontline workers and scientific experts, we explore the biggest challenges faced in healthcare and how these brilliant people have solved them. I'm your host, Cale Donovan, an award winning entrepreneur and co-founder of Bare, one of Australia's largest end of life providers.

00;00;28;06 - 00;00;52;00

Cale

On this episode, our guest is the legendary Fiona Wood, a trailblazing burns surgeon and researcher whose work has changed the lives of literally millions of burns patients worldwide. She has dedicated her life to improving the treatment of burns injuries and her pioneering work — the spray-on skin technique, which she developed with Marie Stoner, is now a global standard in Burns treatment.

00;00;52;05 - 00;01;15;17

Cale

Fiona was thrust into the spotlight during the 2002 Bali bombings, where she led the team at Royal Perth Hospital to treat many of the survivors. Her illustrious career has been recognized with numerous awards, including the Australian of the Year and most recently the Officer of the Order of Australia. Through her work with the Fiona Wood Foundation, she continues to push the boundaries on improving the quality of life for Burns patients.

00;01;15;19 - 00;01;39;26

Cale

In this episode, we're going to explore what's the best thing about being Fiona Wood. The holistic impact of burns, injuries and what we need to effectively treat them, and the one medical advancement that may set Fiona's retirement back another ten years. Now, it's not often you get to speak with a literal national living treasure. Beyond her countless achievements, Fiona's energy and zest for life are really infectious.

00;01;39;26 - 00;01;52;21

Cale

And what stood out when I spoke to her. Get ready to be inspired by the groundbreaking life and work of Fiona Wood. Let's dive in. So, Fiona, thank you so much for joining and welcome to the show.

00;01;52;27 - 00;01;54;21

Fiona

Thank you very much for being interested.

00;01;54;21 - 00;02;10;10

Cale

And your optimism is actually infectious. When we spoke pre the show I got off sort of bounding out of my chair. Do you think that's novel in sort of what you do in healthcare more broadly, this sense of unbridled optimism, and it's really set you apart from others in the field.

00;02;10;12 - 00;02;31;01

Flona

I know I'm a little bit over-the-top. I get that sometimes, but I'm-motivation. I don't know what motivation is, but I know it's contagious. Yeah, and if you're passionate about something and you're really interested and you want to make it better and understand why, then, you know, coming to the table with that sort of a glass half full means, oh, we can do that.

00;02;31;06 - 00;02;49;14

Flona

Well, let's not think "walk away". Let's look at how and, and I found that it's contagious. And so rather than set me apart, I think it helps bring people into that sort of groundswell. That means we've all got the energy, we bounce off each other and we keep pushing for it.

00;02;49;20 - 00;03;11;29

Cale

It's interesting because there is a definition in and around charisma, which is essentially what you're describing. It's this laser focus on a particular topic which becomes like, almost like a gravitational pull for other people to hear you speak and do. And so it sounds like you've almost created that level of charisma just by you being so passionate about, you know, particular topics.

00;03;12;00 - 00;03;32;11

Cale

We're going to talk a lot about the current research that you're up to. There are many people listening who will know your story. For those that haven't. I would love to get the whistle-stop tour. From humble beginnings in the UK through to this spray-on skin and, you know, ultimately being listed as one of Australia's National Living treasures, which is quite the honor.

00;03;32;12 - 00;03;37;22

Cale

Can you give us just a brief overview of that journey, albeit, you know, as, as tenured as it is.

00;03;37;26 - 00;04;06;24

Fiona

Right. Well, I'll kick in point number three or four to my mum and dad obviously in the Yorkshire mining village where they'd left school early at 13, 14 and they were absolutely focused on education and sport, to be perfectly honest, giving us an opportunity to move and to move out of that environment. And, you know, education gives you the opportunity to get up in the morning and enjoy what you do, was a mantra, and I was able to do that with the support of my parents.

00;04;06;24 - 00;04;31;22

Fiona

I ended up going from the state school system to a private school run by the Society of Friends, the Quakers. When I was 13, my mother got a job at the school that changed my life completely. I was able to then go into the university entrance. I went to medical school. Anatomy fascinated me the whole way your body flows inside and out and I thought, if surgeons put this back together, that's what I'm going to be.

00;04;31;24 - 00;04;49;03

Fiona

And so my, my whole life from there was focusing on surgery. What kind of surgery are the general surgery as one did in those days. And I was very much in the minority being a female in that space. And I knew I had to have a CV that was different from the boys, or better, if not, you know them.

00;04;49;06 - 00;05;08;23

Fiona

And so research became a big part of what I did in my spare time. Because, and I'm a why kind of person, and I come from a why kind of kid to why kind of old person now. But research really gave me the opportunities as I went forward. And then I met and married a West Australian. I've known him for three weeks.

00;05;08;23 - 00;05;31;18

Fiona

It seemed a reasonable thing to do. And then I arrived here. By then a couple of years later, we had our first two children, and in 1987 I landed in WA and had four more children and shimmied through the system here to become the director of the burn service in 1991 as a plastic and reconstructive surgeon, and I'd already started the research.

00;05;31;19 - 00;05;54;18

Fiona

I was very much part of my DNA and understanding that learning from today to do tomorrow better, of course, is a coping strategy as well as a drive to investigate and understand things so that you to pull them apart, to put them back together in a better way. And that's when the spray-on cell skin story started for me in 1985, but in earnest—the first patient we sent skin to Melbourne in 1990, and then by 1993, with the telethon grant, we had our lab went up with Marie Stoner, the scientist that I was working with for the first part of my career. And so we've gone from growing skin cell sheets in the lab to actually devising a kit that is really the lab at the bedside, and that was part of the whole spray-on skin.

00;06;18;25 - 00;06;35;10

Fiona

And we did that in the 1990s, and we're still working on that. And that's part of what we do is that that kit has been commercialized. It's gone around the world, but how to do better, because that's, as I say, is part of the DNA. So that brings us to what we do right now, I guess.

00;06;35;10 - 00;06;47;27

Cale

By the way, people who haven't read your book go and read it. It's amazing. The link to the book will be in the show notes. That, the thing that I took away that, funnily enough, is in visiting, you showed up shimmying your way through that, through the healthcare system to your current role. Oh, that's a, it's a fantastic turn of getting yourself into a particular position. That's great, I love that. Is there something you can share that people don't know about you? Because a lot of those things are just part of the public story. Fiona Wood, is there something behind that that you maybe haven't shared before?

00;07;04;26 - 00;07;27;26

Fiona

I think that's a really interesting question, because, you know, there is the public story of me would have been very happy to share over the years, because for a long time we were beaver away. And it wasn't until really, really early 2000s when people became aware of what we were doing around the Bali bombing, when there was so much tension in this space.

00;07;28;01 - 00;07;51;18

Fiona

But during that, that period, I think I reflect back, and I look back, and how did we do that? Yeah. How do we keep that going? And, you know, and the kids and everything. I remember sometimes coming home over the afternoon, being so tired and hurt, and standing at the front door, just taking a deep breath and hearing the noise coming from the inside of the, what?

00;07;51;20 - 00;08;15;09

Fiona

Here we go. And taking a deep breath: Hi, guys. Because I, I remember thinking consciously, it's not the problem. I'm this tired and, you know, change is equal to the rest. And this going into that whole different environment where I just, like, in a different mode. And I think, in retrospect, as I look back on it, and they do, I get the kids to have fun and play, and then they get to bed and sleep.

00;08;15;09 - 00;08;41;13

Fiona

And then I'd start doing the research work when they're asleep, and that sort of capability to get that level of energy to keep going. I just think, oh my gosh, is that really me? Yeah. So it is. And it's interesting. People ask, what was it like? It's hard to remember, you know, so much going on. I was so, so busy and so driven that it is hard to remember.

00;08;41;16 - 00;09;02;09

Fiona

And there's when you asked that, I had a vision, a vision of me standing by the front door thinking, God, I have to sleep for a week, to sleep forever. Move over, Sleeping Beauty. I mean, you know, and just think, you know, shake your head. You're on. Yeah. This is different. This is different. And just change gear, change tack, change focus.

00;09;02;16 - 00;09;22;26

Cale

It's actually a really good segue into a question that I had about just you being so prolific and ideally trying to get some insight into how is that the case, that I think by what you're saying, there is one really important thing is trying to consistently, you know, change your mindset of this is an opportunity. This is a change.

00;09;22;26 - 00;09;37;26

Cale

This is something that I can sort of go again at rather than getting bogged down. Are there other things that spring to mind beyond just put your head down and go? That that really helps you like, achieve, you know, objectively a huge amount over a relatively short period of time.

00;09;38;00 - 00;09;59;02

Fiona

Well, I think it's interesting because I've always thought, well, whatever I do have done, whatever is in front of me, I have a capacity to work. And so whatever I've done, that's what I bring to the table. Yeah, but I think actually there's more to it than that. The choice of the area I work is it's very complex. Burn injury is really complex.

00;09;59;02 - 00;10;22;06

Fiona

It has an impact on all body systems. It's trying to get things all together is like, I've often felt like I'm a Chinese plate juggler. Yeah. And it's a really complex and lots of multiple systems. And how, how do I keep my blinkers off and bring together all the science and technology that's emerging on the ground and in the past so I can bring it to the table?

00;10;22;08 - 00;10;44;25

Fiona

So I think there's something about my personality initially. Yeah, I've got capacity to to work, but I chose something that would stretch me because so and this, it does, is challenging on a daily basis. It stretches you. And so you put that together. And then I've work in a space, where, for a long time, yeah, the jigsaw puzzle is really complex.

00;10;44;25 - 00;11;02;17

Fiona

And I can see the whole of the jigsaw puzzle, but I work with different groups and really see part of that jigsaw puzzle. And in the early days, I was criticized because you, all over the place,

you're working on scarring or you're working on physical therapy, are you working on the cell biology or are you working on nutrition?

00;11;02;17 - 00;11;31;20

Fiona

Are you working on pain management? And are you working on first day though, and so on, all these different things? But yes, because they all matter. And as the years have gone by and we've been dug in and I've connected with people who've got a capacity to work, we've driven lives, we've started to build the the jigsaw puzzle to the point where people go, oh, it's connected because we've made it possible for others to see these connections that are not immediately obvious.

00;11;31;23 - 00;11;59;14

Fiona

That tested my resilience. I guess. So. So it's, it's that personality and it's there the energy and the drive, but also the connectivity with people to give you that boost in energy when the days are difficult because we're working in the lab, but also at the bedside and at the operating table and in the clinic afterwards. And was it, gosh, could I have done better, you know, let's learn from this.

00;11;59;14 - 00;12;12;17

Fiona

Let's, how, we'll figure out how. So I think the complexity of it is something that I needed intrinsically. Because if it's too easy, maybe I would never have been able to work that hard.

00;12;12;19 - 00;12;38;18

Cale

It's incredibly interesting. I find, because there's two parts where you describe, which is something that will stretch you. And so by default, you kind of have to go out of your comfort zone. And then second to that is this idea of if you're leading teams or try to achieve something is including more people in that and showing them ideally as much of the picture or as much as that jigsaw puzzle as you have available to you.

00;12;38;18 - 00;12;56;27

Cale

And it sort of creates this larger problem solving than getting stuck in particular ruts, which kind of by nature limit not just your output, but also sort of your areas of focus. That's a really, really interesting way of thinking about it. Fiona. Before we dig into burns, I also have one question as well, which was pressing for me.

00;12;57;00 - 00;13;10;23

Cale

You mentioned previously that your evolution into this public figure is probably wasn't expected. I would love to hear how your journey has been, if you found that challenging. Have you found that rewarding? Exciting? All of the above?

00;13;10;25 - 00;13;36;01

Fiona

But if you ask what's the most awkward part of it, that would have been it. Because I remember having a conversation with a group of Australians of the year, and we all started drinking in Canberra, and there was a group of people that actually went to the table to be famous, whether it be in music or in sport. And like that's different again, because you get the lot out of place, but you also get a lot of support and excellence.

00;13;36;01 - 00;14;04;08

Fiona

You have to be a public person and out there and all. And then there's a group of us like, you know, Fiona Stanley, and Ian, with his vaccination and, and stuff, who we got like, oh it was left field for us. It wasn't something that was on the table. It wasn't something to strive for anything. And so I think it is that sort of incidental attention, if you like, has been challenging for me because I always say it's not me, it's the team.

00;14;04;08 - 00;14;21;16

Fiona

And it's lots of, you know, support around us. And every time something happens, I always respect the fact that people have put me in the position and that I never have to work harder to justify it. Oh, okay. All right. People have put faith in me. I have to, I have to make sure I respect that and honor that and, and do better.

00;14;21;21 - 00;14;36;24

Fiona

And so it's quite, I think, a different lens to put on being well known than a lens, well, I, I'm a great musician and I deserve this. I've worked really hard and people have noticed. And so I must work harder because they've supported us.

00;14;36;24 - 00;14;54;05

Cale

Sort of ties back to the prolific question, actually, which is maybe another thing is to put yourself on increasingly larger platforms. And so the expectation, if you want that, the expectation sort of has to rise with that. I'm not sure. I don't think it's actually a healthy approach, but it's one approach for sure. So let's, let's dig into burns. I would love to hear how burn care and treatment has evolved in the past 30 years, almost bring us to the present day. That would be fantastic if you could do that for the listeners.

00;15;07;20 - 00;15;36;14

Fiona

I think certainly the capacity of us to treat people and get a better outcome is one of these things that just is incremental over time. And because we have an opportunity, I say every intervention from the point of injury will influence the scar worn for life. Then our education and research into burns first aid — clean cool, running water for 20 minutes in the first three hours of injury has an impact.

00;15;36;17 - 00;16;07;07

Fiona

And so there's opportunities along that continuum for improvement. And in Western Australia, we've spent a lot of time, for example, in prevention, of course, and then teaching our community first aid. And now we're trying to lift that and take out more information to our community so that they can actually influence the scar they wear for life. And so, as we go through this, then when I first started, I was very aware the, the criteria of survival was underpinned by what we did.

00;16;07;07 - 00;16;46;10

Fiona

But that has to be more than that. And another one of our mantras became the quality of the outcome must be worth the pain of survival. So we've explored, the dressing systems have evolved with infection control, the silver based dressing systems they called advanced wound care. Yeah, they they've evolved over the years and are much more sophisticated now, 30 years on different systems of wound care, nutrition, pain relief, surgery, the surgery we do now and we remove the burning and we've got different instrumentations to do that and how we repair the wound with the introducing the cell therapies into the traditional therapies as well.

00;16;46;13 - 00;17;13;09

Fiona

And then rehabilitation, early rehabilitation has been a hallmark for us here in Western Australia. Early was considered six weeks post injury. When I first started, I thought that that's kind of light. And so working with a dilator, the physio for over 20 years now, we thought two days was smarter. And so we're known internationally for our very aggressive rehabilitation approach, which has borne fruit.

00;17;13;12 - 00;17;42;21

Fiona

And then, the, the scar was obviously a focus and we've changed that with cell therapies 80% of our children have no visible scar. But yeah, the, but there's a psychological scar. The stress and the pain and the suffering and the changes that we see there. And we work a lot in supporting the trauma informed care. And then more recently, we've started to explore the physiological scar, how you change internally, the blood and the systemic changes. So lots of change. Absolutely. But that's just the platform for tomorrow. And we've got lots of work to do to change tomorrow.

00;17;51;03 - 00;18;07;19



Cale

Let's talk about tomorrow. One of your research areas is looking to this concept, is obviously neuroplasticity. So the underlying thesis being that a burn injury drives or may drive changes in the brain. Can you tell us more about that specific area of research and what you're trying to achieve there?

00;18;07;20 - 00;18;28;16

Fiona

Yeah, we look at the, the physical, the psychological, the physiological scarring. And we've got five areas that we investigate. Well, obviously the cell therapies we progressed now to 3D printing. But one of the areas that's always been core to what I've tried to do is the neurological response to injury. And this is something that has been a passion of mine ever.

00;18;28;22 - 00;18;58;19

Fiona

And I've just been fascinated by the concept of you use the power of the mind and of the brain to actually improve outcome. And this has been observations I've made along the years, as you can imagine. But with our research, categorically, if you are burnt on the back of your right hand, the nerve density in the skin of your left hand will change, not burnt, and you will have the cell bodies around your spinal cord will change, and the patterning on your brain will change.

00;18;58;24 - 00;19;26;04

Fiona

So first of all, some years ago we started investigating these changes and started looking and tried to understand what was going on. And then from the base where we saw these changes that we said, well, why and how can we use them? And so, a few years ago, one of our students did a project where he looked at using transcranial magnetic stimulation in order to map the, the neuroplasticity, how plastic is your brain, how capable every brain is changing.

00;19;26;06 - 00;19;54;23

Fiona

And this was a group of people that were older. And we found that there was, there were people who were more plastic, and had a tendency to get better quicker. How interesting. And so now we are in the middle of a randomized controlled trial with transcranial magnetic stimulation, a sham with our colleagues at Murdoch and Marie, Vallance, against a body of students where we're stimulating the brain with magnets to stimulate neuroplasticity post brain injury. The hypothesis is that that will mean people get better quicker, with a better quality of outcome from a functional and, and pain perspective. And so we're writing the thickness at the moment. And it's been fascinating. I'll have to come back and talk to you in about a year when we've done all the analysis, but so far so good as I say.

00;20;16;02 - 00;20;27;16

Cale

Oh it's incredible. I would love to have that conversation. The other areas you mentioned, those sort of five key areas, but are there any cutting edge sort of areas of treatment that you're particularly excited about also?

00;20;27;19 - 00;20;52;20

Fiona

Oh cutting edge. That has to be the iKnife, excuse the pun. Well, the iKnife is something that we've started work on relatively recently. I've been stalking this technology around the world for a while, and Waters is the company that produced this. The capacity for real time analysis of chemistry. So basically I've got a hot needle, which I can use to cut through skin, and that generates a bit of smoke.

00;20;52;22 - 00;21;16;22

Fiona

And the smoke is analyzed real time, and it gives me a fingerprint of the chemistry of what I'm cutting through. So I am really excited by this. And it's put my retirement back ten years because I want to know what normal skin chemistry is. So we're at the moment in a situation where we're building the library of skin chemistry, body size, age, sex, what medications people are on with skin. That's maybe where there's discarded in surgery. And then we compare normal skin, with burn skin. So we can use this to potentially in the future. So we can just see how accurate we can remove the burn tissue without moving anything that can be salvaged. Because if we salvage, we can get better outcome. It's been trialed for breast cancer and colon cancer in different parts of the world.

00;21;39;28 - 00;22;01;00

Fiona

Can we use it for skin cancers? Absolutely. But we need the skin library first and we're building the skin library. And yeah, it's exciting. I can go look up and I can see 3000 molecules in a raid on a computer screen in front of me. I'm a complete nerd. Really. The pattern is different when I'm looking at cutting through scars through skin.

00;22;01;05 - 00;22;20;09

Fiona

So this is an exciting area. I think chemistry of the skin is exciting as well, in that we've started doing some work on the surface of the skin and trying to understand what we can measure on the surface of skin, and gives us an indication of what the cells are, how the cells are performing within the skin. And we take blood tests because we take blood tests. Yeah. And it's become well-established. What information can we get from a much less invasive approach? And certainly that's, you know, can we predict outcome by understanding the surface chemistry related to the underlying cell function? That's a fascinating area.

00;22;36;28 - 00;22;56;08

Cale

Well, that's, I'm fascinated. I'm going to join the team just to help. How do you get to the stage where the samples that you're taking or the. Yeah, what you're looking, becomes hyper personalized or it's always you see it as this is scar or healthy tissue or this is, you know, appropriate for a 60 year old woman as opposed to something else. Does it get to the point where it becomes very specific to the individual, or is that not helpful?

00;23;00;18 - 00;23;31;05

Fiona

To answer honestly, I'd have to step back from. And so it goes right back to the roots. As you asked me that question, there are people I can see in my mind's eye right here, right now who have those outcomes at both ends of the spectrum. Good and bad, have nudged my head in different directions, made me think differently, made me engage, tried to solve the problems differently so there are people whose lives are intertwined in my brain and they'll be there forever.

00;23;31;07 - 00;23;57;01

Fiona

But from a perspective of my survival, I guess living and working and breathing all of this, I learned very, very, very early on that sometimes in suffering on such an extreme level, I had to understand how to cope with that. And my coping strategy has been that aggressive engagement in the research and that tomorrow, so that, that is not personalized.

00;23;57;01 - 00;24;20;02

Fiona

That is my trying to build an understanding that we could put out there in the literature so everyone can look at it differently and see different things and progress. It doesn't matter whether we make progress here. What matters is we make progress. And so that's been very much my coping strategy. So then my coping strategy is a capacity to depersonalize, if you like, as well. There are many, many people that I know have been instrumental in the journey I've taken and will be in the future. I'm sure that I will never forget.

00;24;29;21 - 00;25;03;08

Cale

One of the questions that we like to pose on the show to anyone coming on when we're looking at really challenging parts of medicine, is the impact. And so I would love to understand maybe the impact of a really successful burns treatment and it's obvious, right? Like it's actually very visible in many cases. But where I was going with it was maybe the impact that recovery and treatment can have on a person psychologically, on maybe the family unit or the extended relationships economically. What's the real impact of your work that you say?

00;25;05;25 - 00;25;27;20

Fiona

It can be many, many different things and everybody's unique. And yeah, everybody has got a network around them and some unfortunately less so. And that has sadness in of itself. I always

say it's like you drop the pebble in the water and there's the ripples. And the ripples do affect those people around in the emotional and financial and physical ways as well.

00;25;27;22 - 00;25;49;12

Fiona

I think it's a really interesting question because it reminds me we always have to be aware, maintain an awareness and an open mind. For example, in our children, kids who [come] here quickly, it's been a little bit of a stressful time. They've been paid— in painful dressings. There's a lot of emotion around the episode and psychological disturbance, of course, and guilt and things. And that six weeks, there's no scar and our routine for a long time was six weeks. No scar, catch you later. Job done. Everybody's happy. Until we started to realize in some cases, the carers around that child were not back to normal in six weeks. There was still a level of suffering from the stress of the event. And so then we go, whoa! We were so focused on the child, we forgot the— everyone. And so you adapt accordingly. And then is part of that learning. And we've developed different systems, a learning management system, for example, where people can go and I can understand and demystify it and, and understand why they're feeling this way and understand the impact of the injury and all those.

00;26;30;21 - 00;26;55;23

Fiona

And so providing the opportunities for learning and help and support. That's just one example of how this whole system, we've got to be aware of as many things as we can all the time, and that presents challenges in of itself in a health system that's been pressingly complicated and trying to navigate our patients through that system and help them out and the other side and not forget those people around them that are taking that journey with them.

00;26;55;28 - 00;27;13;28

Cale

Yeah, it's so true. I think the ripple analogy is a really good one for, you know, the initial trauma, whatever that is, or the initial sort of injury, should I say it's different for different people, but it is easy to often forget how it can be really impactful and potentially more profound than the actual original injury per se.

00;27;14;00 - 00;27;34;25

Cale

What we like to do in the pod also is get advice and application for folks that are listening. And so I've got a couple of types of people who would be listening in and will have a very brief, singular piece of advice for these folks. The first one is people who are trying to balance a hectic professional life, ideally in medicine with family life. Any tips there?

00;27;36;22 - 00;27;57;01

Fiona

I plan things. I have to confess, many, too, over the years. I look back, and it's hard to remember because there's so much going on. But I did things like cook with the kids on the weekend, put

loads of stuff in the freezer, plan ahead as they got old enough, teach one of them to do on which day—you know, rotations—share the workload in that context. And I plan for us as a family. My kids do sport before and after school every day, and they went on to represent WA, and a couple represented Australia. And I say it's because we made you do it all, and sure, there were challenges as well, I promise. But anyway, so it's actually planning. Yeah. Make a list. That sounds really trite, doesn't it? Well, I make a list every day still, so I can work out how I can fit within it or not. And then I've got better at saying, actually, I can't do that. I used to just shimmy around, as you could say, shimmy random sequence, to get everything done.

00;28;31;13 - 00;28;50;25

Fiona

But I'm a list maker because I want to plan, and I want to be—I know that I can get to the end of the day, I've been achieved. And I found early in the pace that it's easy to be skipped from one thing to the other. Now, you've got to drive things home. Completion matters, and you've got to give yourself some time and space to do that. And so therefore, each day was a military exercise. Two of my kids ended up being doing drill, thinking like, why did you even drill them a bit much better than me?

00;28;57;20 - 00;28;59;23

Cale

They were there just to feel like how basically.

00;28;59;27 - 00;29;00;23

Fiona

Yes.

00;29;00;23 - 00;29;21;15

Cale

So the second group of people, yeah, there's a lot of really talented younger people that are either starting out or considering starting out in medicine. And that may be as a practitioner, as a technologist, as a researcher or an academic. Do you have any advice for people considering sort of medicine as an area that I should be over into versus all of the other opportunities that they would have nowadays.

00;29;21;21 - 00;29;45;09

Fiona

I think it's really interesting. These are all the other opportunities because in my day, you know, at the top of the class, you did law or medicine, you know, it was a simple take [then] done. Yeah. And I think some of the opportunities I've been involved in discussions around the paralysis of analysis in and young with people absolutely understand the need to weigh the options and do investigation.

00;29;45;09 - 00;30;04;23

Fiona

But at some point you've got to take the jump. Yeah. And the jumps are exciting. And so yeah, it's not something to be afraid of. It's something to learn from. You know, you can land in all sorts of ways good, bad and ugly. But at least you'll learn. Whereas if you step back from the edge, your capacity to learn is very limited.

00;30;04;25 - 00;30;29;07

Fiona

So I would always say take the jump. If you've got an opportunity, take the jump. And then when you do that, you start to learn about yourself and what really you're passionate about. I don't know that people ask me, why do I do this? I don't know, but I know I've really I've actually just about it because I've gone and have found what I'm interested in, and there's nothing like getting up in the morning and enjoying what you do.

00;30;29;08 - 00;30;51;11

Fiona

A lot of folks out there, I've got a huge educational capacity to do all sorts of things, but they would be happiest and most productive if they find what it is that clicks with them, and you won't find that sitting down. It will not land in your lap unless you look like a lottery winner, which is like, ridiculously rare.

00;30;51;11 - 00;31;06;18

Fiona

You'll find it by taking the jumps, you'll find it by engaging, by, you know, just holding your breath, will you look stupid doing that again? Yeah, but so what? Do people remember that? You do, you think they do, but they don't. Yeah. So you may as well just take the jump.

00;31;06;20 - 00;31;24;00

Cale

That's amazing. Amazing advice that I like about this concept of not taking the jump is like not learning it either, because as you described, you can almost learn everything about a topic or everything about a thing you may be interested in. And until you actually do it, you won't actually know. You will have jumped cross to realize if it's a thing you want to do.

00;31;24;00 - 00;31;48;16

Cale

So super interesting advice there. Switching gears a little bit, I did notice one of the studies that you're undertaking is around surfing as a vehicle to improve wellbeing in kids who've got chronic illness or health conditions, and you've already alluded to it, a touch on this idea of better mental health, better wellbeing leads to and possibly faster recovery and sort of medicinal benefits. Is there anything interesting that you're seeing in that space? So can you talk a little bit more about that either conceptually or specific to the study?

00;31;54;29 - 00;32;15;08

Fiona

Rather the first answer, firstly I'd say is I exercise every day. There's a lot of evidence that you better function, better if you're fitter. You know, wellness and fitness go hand in hand. Yeah. So you don't have to be an elite athlete to get health benefits from exercise. Modest exercise, you will perform better, and there's loads and loads of evidence out there.

00;32;15;13 - 00;32;34;11

Fiona

But this story for me, if you don't mind me telling a bit of a shaggy dog story— we've always been very aggressive in our rehabilitation. We have a gym embedded in the Burns unit, and, you know, we built that a long, long time ago. That was, it's part of what we do. And force in this, this idea that you can actually recover and actually improve.

00;32;34;12 - 00;32;59;22

Fiona

But in 2003, I met a young boy with an 80% body surface area burn. You know, we did everything we possibly could. He survived beautifully. And so we've done a really great job. And that was one of those days when people are discharged and they've done really well. You think it's good? Unfortunately, he died as an 11 year old with a rare cancer, and I was told that was bad luck or coincidence, and I could not reconcile with that.

00;32;59;22 - 00;33;25;13

Fiona

And we presented his case. A few of the old guys like me, remember the odd case, him in there. But Western Australia is very good at data linkage. And so I nagged those guys in data linkage until we eventually got together and put a grant together and got the money from the NHMRC. A long story short, we got a database of 34,000 patients who've had hospitalization for burn injury since 1988, until 2012, I think.

00;33;25;13 - 00;33;53;06

Fiona

And then we had 120,000 people with no burns. We compared with respect to their age, their sex, their where they lived and their socio economic parameters. And we found that if you have had a burn injury, you've got in some people an increased risk of cancer. But why? And who? And so one of our research streams, which we are very heavily driving, is we have a biobank at the children's and the adult hospital, collecting specimens, we work in the Phenome center here, and we can see that there are changes in the immune system, in the inflammatory response. Many, many years after the burns. We've linked in with our cardiothoracic cardiology colleagues because they have an increasing cut in heart disease. Wherever we looked: mental health, neurological, respiratory. So we're right in the weeds trying to find out how we can predict who and therefore change the trajectory and actually mitigate against this outcome.

00;34;23;03 - 00;34;45;05

Fiona

And so that, as I say, we're right in the weeds, that we publish things which we are learning all the time, but we haven't got the answer yet. So what can we do whilst we haven't got the answer? And exercise is something that we can do right here, right now because as I said, we know the health benefits of exercise. In the adult hospital, we've got programs and gym programs for people that have been burnt previously, and we're trying to understand the impact of the exercise on, on the the physiological health as well as the physical function and the psychological health and the psychological well-being and in the kids, I got there in the end, and my colleagues in psychology put together a program around surfing, as some of our patients have been through the surfing program, we've just finished recruiting to a trampolining program where the kids learn the trampoline on Olympic-sized trampolines, because one of the things one of my kids did was very high level trampolining.

00;35;23;17 - 00;35;59;28

Fiona

And so I just started trampolining club at one point because it was easier than driving her to the, to Whangarei, as one does anyway. And then there's a big program at the Children's Hospital called Move to Improve that's supported by the Parent Foundation and the PCH Foundation, where kids with diabetes, cystic fibrosis, cerebral palsy on a cancer diagnosis as well as burns are just, we're just starting this program looking at integrating kids into community sport in an effort to improve their wellness from the psychological, physical and physiological space. Whilst we look in very, very hard of figuring out who may go down one trajectory or the other. So yes, it is interesting, it's exciting and physical activity, funnily enough, is good for you.

00;36;13;23 - 00;36;29;05

Cale

Who would have thought after all that? Who would have thought that. You've already referenced to a degree this idea of I've got my next ten years set out for me based on some of the cutting edge things that are coming through in your world. I did want to ask you what gets you up in the morning nowadays?

00;36;29;05 - 00;36;48;18

Fiona

I think, I get up in the morning, I mean, I exercise every morning and then I jump in the ocean and that wakes me up. What really keeps me at this table is the amazing science and technology that surrounds us. Ready to be harnessed to make a difference to an individual. And for whatever reason, I could join dots. Some of the dots should never be joined. Get that? And I'm very pragmatic and I learned pretty quick. But joining those dots and taking that knowledge to change the life of somebody on the front line, that's what keeps me up everyday.

00;36;58;16 - 00;37;05;26

Cale

Incredible. A little offbeat question for you. Well, let's project many, many years forward, you're writing your own eulogy. What are you writing?



00;37;06;02 - 00;37;08;20

Fiona

Not a lot, because I have been too busy.

00;37;08;24 - 00;37;16;29

Cale

Some other, some other research grant, you'll be, you'll be documenting at the same time.

Maybe put another way is like, how do you want to be remembered when it's all said and done?

00;37;17;02 - 00;37;34;28

Fiona

I would like to be remembered as somebody who was able to help others think differently, because I know I can think differently for good, better or worse, or ugly. But I'd like to be able to first, collectively, to think differently, to solve problems. So maybe be remembered as a problem solver.

00;37;35;01 - 00;37;53;13

Cale

I think that is, that is safe. That is for sure going to be one of your many, many memories that you create. The final piece, the name of the podcast is called Grin + Bare It, and the reason it's called that is because it's often the piece of advice given to people when they face with challenges. So it's kind of, get on with it, right? I would love for you to provide a single takeaway for a person listening who's experiencing a really challenging time or a seemingly sort of insurmountable challenge. What's your piece of advice to them?

00;38;03;21 - 00;38;26;20

Fiona

The first thing that comes into my mind is grin and bare it, is like you know, keep at it. But then I would temper that. As I've gotten older, you've got to understand, is it worth it? So the first thing is, whatever you face, you have got your time and energy that are unique to you. Is it worth spending your time and energy on what you face?

00;38;26;20 - 00;38;49;21

Fiona

And if it is, then grin and bare it. If not, stiffen your back and walk away. I say that because there have been many times where criticism has come my way, and I've refused to engage. Criticism without engagement in problem solving— it just sucks your energy, leaves you nothing, leaves you empty, and you've wasted that time and that energy and not being productive.

00;38;49;25 - 00;39;05;16

Fiona

Criticism and engagement, problem solving, sweet, life's plot. So you have to be— is this what I face worth spending my time and energy? And if it is, a smart mind is on getting somebody to

help you as well. Not being too proud to ask for help. And if it's not, don't be too proud to walk away.

00;39;05;20 - 00;39;24;13

Cale

Where's to live by. Fiona. All of your work has been incredible. I actually think, yeah, the biggest thing I've taken away is just your infectious optimism around thinking differently and aiming to make people's lives better generally, and on behalf of everyone listening, I just want to say thanks for joining. I've really, really loved the time I've spent with you.

00;39;24;16 - 00;39;32;15

Fiona

Well, thank you very much. It's been great to chat. Thank you.

00;39;32;18 - 00;40;02;23

Cale

Thank you so much for listening to this week's episode. Hope you enjoyed it. As always, I would love your feedback, questions or any suggestions that you have to someone that I should be speaking to next as our guest. You can find me on LinkedIn, or you can find the Grin + Bare It podcast on TikTok and Instagram. Now the best way to support this show, if you did like it, is leave your feedback, subscribe wherever you get your podcasts, or simply share it with your friends and colleagues. Thank you so much again. See you next time on Grin + Bare It.