From AI To Sexual Wellness: Advanced Biomedical Devices For Prostate Health Transcript

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Introduction and Guest Background

Hello, everyone. Welcome once again to the Prostate Cancer Summit. I am your host, Doctor Geo Espinosa. And it is my great pleasure to introduce to you Doctor Soum Rakshit, who is the co-founder and CEO of Mystery Vibe.

He did his PhD in biomedical engineering and created a startup in eye recognition, which was acquired by a US defense company. He then spent seven years in management consulting on large technology projects.

In 2014, Soum started Mystery Vibe to bring defense electronics and medical expertise together and create devices that solve big topics and sexual health in an accessible way.

Doctor Rakshit, thank you so much for being on the summit. Thank you so much for having me. My first question has to be, so you did this. You've done other, you know, as a biomedical engineer, you were involved in AI recognition technology.

So congratulations on that and getting that bought out. That's great. And then you were involved in other projects. Seem serious. Not that sexuality is not.

And then you said, wait a minute. There's there's there's an opportunity here for sexual health. Prostate health. I have one of your product called molto, which is like a prostate massager, is great for many patients who have their prostate intact.

I got to ask you, why were you having issues with your sexuality? Like why? Typically. Right. You're one's own issues. You know, a psychotherapist or a psychiatrist had issues growing up, and they become psychiatrist.

You don't have to disclose everything if you did, by the way.

Why MysteryVibe Focuses on Sexual Health

You don't have to be detailed. But why get into this field? So, when we finished our last company, which was, you know, technology, I recognition, all of us knew that we would want to do something again in biomedical.

Yeah, because it's what we studied. It's what we love. We did want to get some experience outside. That's why I spent a bit of time in, consulting to learn business project management.

Very basic things that you don't really learn as an academic, as a PhD. So, but throughout that time, we had that, in an eye out for what is the next healthcare topic that affects us. And, enough people, but not enough work is being done.

Yeah. So, you know, as an alternative example, let's say, you know, if we looked at, breast cancer, which is very important and has affected, you know, people we know, but there's a huge amount of work being done.

Yeah. And we didn't really think we could add value. Whereas where we looked at things like, say menopause, seeing our, my mum go through a hysterectomy, my sister going through it, you know, just, talking to colleagues, or, say, pelvic pain after childbirth, talking to colleagues about, erectile dysfunction.

And so things that are very common, yet not at least ten years ago when we started not talked about publicly at all. So that was kind of the funnel that gave us the answer is yes.

We want to use our biomedical expertise in another area of healthcare. But where we felt we could add the maximum value was when there was a huge patient population and not enough solutions.

You know, I love it. And I tell you, we were we were talking before we started recording. Right. And, I only through the summit, through, my podcast. Anything has to do with my name next to it.

I only affiliate myself, connect myself with LinkedIn and companies that have science that are serious about what they're doing. They're serious about their product initially.

You know, there are many companies that come to me with, you know, this prostate massager, this thing for the penis. And it's like all to me is gimmicky.

They might be okay, but it's just gimmicky and not just a good product. You guys are obsessed with the science of your products and mystery vibes. So tell me a little bit about about that, about what goes into creating what we can talk about multiple or any of the products, just so that the audience knows, this is a prostate cancer summit, right?

Sometimes men listening will not have a prostate because they'll have their prostate removed, but those that still have a prostate, for example, intact, perhaps on active surveillance, even, they can benefit there. Well, let me just come back there.

Many patients that I see who have both, they have done active surveillance. They also have prostatitis at the same time, inflammation of the prostate, pelvic pain.

That's that's caused by that. Prostate massage is important. And, you know, really useful and therapeutic. Doctors are not going to do it. So the audiences know off the back doctors are not going to do it's good.

It used to be done all the time. I did it early on in my career.

How the Devices Work and Are Designed

I just don't do it as much anymore. So the fact that you have this tool now that patients can just do on their own, that's legitimate. It's not too big, right size and everything.

It's so great for men who have, you know, prostate issues or pelvic pain issues from the prostate. Your other products that I, prescribed yesterday to a patient is, it's called to noodle, I think, where it kind of helps with venous leak.

This is for patients again. So here we have a patient with prostate. After prostate cancer treatment that then they but they're still able to be sexually active.

They go flaccid in the middle of intercourse. This is your product to noodle. There's two types. It can be very helpful. So go into more detail in terms of the products that you offer, particularly in men with prostate and prostate cancer history and how they can help them.

Yeah. So what we do is fundamentally deliver vibration, you know, wherever it's needed. So like your direction vibration on the premium and the glands, the penis shaft, for prostate pain relief, vibration in the prostate.

And similarly, you know, pelvic pain would be by the claw. So, at a fundamental level, we do something quite simple. And the reason I say that is there is 100 years of clinical literature on vibration, on the application of vibration in sexual health to, and that was one of the reasons why we picked it is it's we're not trying to invent the underlying science because that would be really long, you know, to prove a new model, is effective is a ten plus year research exercise.

So we were looking at it as what science is irrefutable is definitely works enough evidence. And how can we deliver that in a very user friendly way. So where we come in is making sure the vibration, frequency, the vibration

amplitude, which is how powerful it is and the, malleability, you know, the flexibility is the right amount where you can reach wherever you need to reach, whether it's prostate, vagina, penis, perineum, wherever it is that you need to deliver the vibration, you can easily do that, on your own without needing help.

And that is, that is really the summary of all of our device and our tech. And how we do that is we design and configure the motors in order to get the right frequencies.

We design every material, so it could be a composite setting into, for example, is a stretchy material, which is a mixture of, resin polymers, plastics and, infused with moisture and then encapsulated in, over molded silicone.

So it retains that to no matter how many times you stretch it, it will always, come back and maintain its tensile strength. So, and then for example, our pelvic pain device, which is crescendo has hinges, which is very similar to the design of a laptop.

So the laptop screen you can, put up, but it won't fall down. But equally, it's quite easy to move to. The same concept is it's very easy to bend to reach the pelvic floor and pinpoint the vibration exactly where you need.

But equally, you can easily bend it with your hand without much effort. So the so what we try to do is and quickly talking about molto. So molto is similar to the bendy bedside lamps.

Yeah. And it's made, of steel inside. So it's incredibly strong. And just like the lamps you can bend it and it will, hug the rectum as you insert it and reach the prostate.

So where we come in is we look at, technology that exists in different parts and nothing to do with medtech. It can be any, any tech. Yeah. And we try to see if we can use that tech in delivering what the doctors are asking us to build.

So for example, like you said, that a doctor could use their finger to reach the prostate and massage it. And then equally, if we were doing it with technology, how would we figure that out?

What kind of materials? What kind of, combinations of stuff do we need to build in order to recreate exactly what, that, patient care routine would be?

That's excellent. How long does it take to. To me, it sounds like. Wow. Before going to market, it must take a serious amount of time to create a product, right?

Testing, retesting, probably getting feedback from experts in the field. What does that process look like before you come out with a specific product?

Product Development, Testing, and Clinical Validation

Yeah. How long does it take and what what what goes into it. So I would say three years would be the minimum for. From an idea to an. Idea to yes, if everything goes well, which it never does.

Right. So the so, so basically we would say, we start with concepting, then we get feedback. Then the key thing is dimensions, you know, really understanding, you know, what's the 80% or 90% dimensions that we need to address?

And if we can't do that? And this is a really important point, because when we say, for example, to new it with, you know, the very beginning, we try to address 90% of penis girls.

And it was too big. So it didn't work for a lot of people. So then we realized we can only address 80%. So the dimensions matter a lot. And so once we have figured out what's the maximum, we can address, which does mean that the remaining, patient population won't benefit from it, but it is, you know, one of those, trade offs.

We have to, accept. Then we start doing, just internal building, you know, in our labs, you know, using our own plastic, silicone, 3D printing machines, PCB machines.

So we do everything in-house for, you know, let's say a year of iterating. Then at the end of that, once we are semi confident that this is, you know, potentially, good product. We don't know that yet.

Then we will get the initial, units manufactured. The reason for doing that is we can't really do any patient trials unless it's manufactured to a medical grade, which we can't do in our labs with 3D printers.

So, so it is a very slow, iterative and expensive process, but it's the only process, you know, the only way to once we get to a manufactured unit and we go through compliance, then it's safe to use.

But it's no guarantee that it's effective. And we've had products we've got to that point, you know, everything. It looks beautiful and we run a trial and it's not very useful and we have to scrap it.

There's no point if it's going to fail at the trial. And then we try to sell it because you spend money, you just get your credibility to. We would then go back to the drawing board, and then at least we've got a lot of feedback.

And then in most cases you have to start from scratch. So then, that's why I said three years. It's the best case scenario. Sometimes it takes five, you know, more.

So at the end of that process, let's say, you know, the trials went well. The patient feedback is good, the outcome is great. Then we would, do a not that many, maybe 5 to 10,000 units in order to get enough feedback, because a patient trial is never more than a hundred.

A few hundred maximum. But you want to 10,000. And the only way you can do that is release version one, which I guess is no different from, you know, say Apple Watch one or iPhone one.

Yeah. It is good. Or more recently, you know, the goggles, the vision test version one. Right. It's a good product, but it's, you know, I'm sure envision five would be amazing or better.

Yeah. That's right. So. So how hardware line goes. Great. Great is the, the the enemy of good sometimes. Right. You just need to get the product out, and that's better than I go through that.

You'll appreciate this. I am a right, I right, and it's never good enough. I, you know, it's never. But it's like, no, get off your head. Like, this is way better than anything else is out there.

And it's going to help people. Right? So it's that kind of thinking. Exactly, exactly that. So, so the version one is the best we think we can get to.

Before we had very high volume of feedback and an often high volume of feedback comes back with things like, you know, can you make the buttons better, which we thought were good enough or, you know, according to the initial testing set and the buttons are fine.

But when you look at a much wider range of patient population, say, you know, somebody in their 80s who have dexterity issues and they might not find the buttons to be fine, right?

So which which didn't come up in our, cohort. So we get a lot of examples, which is not necessarily, major. But sometimes we do get major feedback, which we have missed.

And in those cases we would, you know, then make a version to instead of just making improvements to the current product, we would then start from scratch and make a new product.

So, I think, you know, like three years is a good estimate that we set ourselves as like, you know, we will get it. You know, we, design it, we'll get it manufactured.

We'll get it, we'll get through clinical trials, we'll get to our regulatory approvals, and then we'll get it into the hands of a user. You know, that's the whole process.

Within three years. Well, you know, that's why, that, you know, there I know you have competitors. I don't know that your industry too well, but I know you have competitors that they probably get a product out without it being well tested, without knowing if it's really useful and valuable to the consumer.

Within a very short period of time, probably less than a year. I see those are the I see these companies and they approach me all the time. So I think they're again, that's sets you guys apart.

You're in the long game. You want to make sure you get it right. And I get the sense by talking to you and members of your team that there's sort of an obsession with getting the product right and getting it better and making it better and better and better.

And I tell you, as a practitioner who sees a lot of men, I appreciate that. I appreciate the work and effort that you guys do. Behind your product. Thank you.

Well, it's I mean, all of it is thanks to the urologists of Joanne's andrology pelvic floor therapies. Because really, what we do is just build what they tell us to build.

So the the real knowledge comes from the clinicians, and we try and figure out what's the best way we can deliver what they need, for their patients. And and lovely again, people are kind of anyone can create something without talking to experts and still, you know, have a little, angle on marketing angle and, and then, you know, that's not legitimate.

Prostate Cancer Use Cases and Final Remarks

Not valuable, and just not a good product. So I really appreciate what you guys do. So, What what the way I think I look, I looked at your product list and I said, well, you know, for patients with prostate cancer who, you know, well, they have to be able to get an erection.

Many patients sometimes don't get an erection after prostate cancer treatment, but many do. I think your, your for example, your to Nudo is very helpful.

Are there any other products that I'm missing that might be helpful for men after prostate cancer to optimize the let's say the sexuality. To your ability. Right.

So 2 to 2 is the best multi vibratory device which creates a lot of stimulation. But if let's say they have a sensitive perineum, or they don't want stimulation on the scrotum internal to many would be, an equally good product.

It is a new domain. Meaning there's a new smaller. Yeah. Right. So there's two noodle, just a noodle. Period. And then the two, you know, this is the new version.

Yeah. So to noodle, to my understanding, is everybody wins. The. So. So the patient or the person, the male patient and the partner, because it also stimulates the partner as well.

Is that right? Correct. Yeah. So, and it's so funny because we started to, to, to work, almost ten years ago. And what happened over the years is a lot of the partners, of the, of the customers who bought into were using the front part of human to, to to stimulate the labia, the clitoris, you know, to get arousal, you know, to get wetness.

But we didn't design it to be used, separately because it sits on the penis and it's used to stimulate the Libyan clitoris during intercourse. So it wasn't the most, convenient, use case because they had to hold, the back bit, which typically vibrates really carefully.

So as a result of that feedback, we created legato, which is it's like a or shaped device which, adapts to the shape

of the labia and, and stimulates the labia and the clitoris and gives a360 a very tailored stimulation to do exactly what the partners of the patients were trying to do, which, you know, all but much, much better.

So, so it is fascinating how we get, told by, you know, doctors and patients what to build next. And that's, that's what drives all of our product development.

Amazing, amazing. Doctor Rakshit that that some Rakshit the am I pronouncing I think something I thought I was. Oh no your perfect. Yeah. That's Yeah.

Doctor Soum Rakshit, actually thank you so much for coming on and sharing this information. You know, I have to thank also Susan Bratten, who exposed me to your product.

She is also on this summit, and she mentioned a few products. And I have to say, you know, when we talked about, hey, what's, you know, if you mention a few products and then she said, well, what's a legit product here that, you know, I can put my name on?

She says, you know, you know, muscle tone, mystery vibes. They're the company. And I'm super grateful to her. And I am super grateful to meet you and to work with you in the future.

How can people find out more about mystery vibes and, and, final words, if you have any. And to our medical site, which has all the information that we were talking about is MVP health.

So, Maria's a mystery vibe. V dot health, very short. And final point is very much education, really. You know, at the end of the day, that's our main goal is how do we create awareness, how do we create education for something as simple, like you were saying, is regular process of massage.

It helps the prostate. You know, it reduces the chances of prostate cancer. It improves, or maybe even a completely, solves prostatitis. And not many people outside people who follow urologists, listen to podcasts, or read, you know, the right, newspapers.

Not many people are aware of, the solutions, which are often quite simple. So, yeah, you know, my, you know, hope is that there is a lot more education.

And we obviously, you know, do a lot and we want to do a lot of that. And, for everybody in attending the summit to go and tell their friends about it, just, you know, more awareness and positive because it is now the number one cancer in the country.

I think it's that 1 in 6 men. Particularly in men. Yeah. Yeah, it is 1 in 6 men, I think. And that's what's diagnosed. It might be more. I think so, yeah.

Yeah, something. Thanks again. I really appreciate you taking the time to be to be on the summit with us. Everyone. Thank you for watching this. Yet another amazing I know I say this after every one, but it just gets better and better.

This amazing interview conversation with, an expert in a field. This is a scientist. This is not just somebody, you know, in a garage, basement. Nothing against people who are creating things in garages.

I know many companies start there, but this is a scientist, biomedical engineer, who take the science very serious in creating their products. Great products that, bring a lot of value to men.

Before prostate cancer, even after prostate cancer. So thanks so much for watching. Keep, keep tuning in because we have more to come. This is Doctor Geo Espinosa signing off.

I'll see you at the next episode. So on.