**Medical Insider COPD Podcast Season 4 Episode 2
Understanding inspiratory effort in COPD**

Dr. Richard Russell ([00:00](https://www.rev.com/transcript-editor/Edit?token=cdc-JmCY2DuOHsv3O0gc_EHQ57oNBsxcHMwqT3ywwP3_0t_o63lYNZ-wb7CyViR9i5BHO7ikoQrjMMnFSbOAuCwVOi8&loadFrom=DocumentDeeplink&ts=0.67)):

This podcast is intended for healthcare professionals outside the United Kingdom and the United States of America only. Welcome to the Medical Insider COPD by Boehringer Ingelheim, a podcast offering a breath of fresh air to clinicians treating COPD across the globe. My name is Dr. Richard Russell. I'm a Consultant Chest Physician at Lymington New Forest Hospital in the United Kingdom, a Senior Clinical Researcher at the University of Oxford, and I'm Editor-in-Chief of the *International Journal of COPD*.

Dr. Richard Russell ([00:43](https://www.rev.com/transcript-editor/Edit?token=a9BlEQQt_SThz72MNWh6RphHutSCya-S5sc85AygrdTANlAN-pxqHj35u2wAg90j2rorI6jOw4KhThCdZTqn2gXj5ZQ&loadFrom=DocumentDeeplink&ts=28.31)):

I'm delighted to be your moderating host for this season of Medical Insider COPD Podcast. I'm here to bring you news and insights in COPD right from the source directly to you. So, thank you for joining us today. Be sure to subscribe and follow our Medical Insider COPD Podcast to ensure you do not miss any of the exciting news, information, and podcasts in this series. Today, I'm going to delve into a new publication, which I believe is well worth reading, which is entitled ‘Home Dust Allergen Exposure Is Associated with Outcomes Among Sensitized Individuals With COPD’. We're also going to look at emerging and exciting topic in social media, a real problem for our patients, that's fatigue, but first, I'm absolutely delighted to introduce today's guest. She's here with me today to discuss the topic of inhalers, and how we use our inhalers. Welcome Professor Sinthia Bosnic-Anticevich from Australia. Hello, Sinthia.

Professor Sinthia Bosnic-Anticevich ([01:42](https://www.rev.com/transcript-editor/Edit?token=h_y5H5715BHWNvFo-b2NFhjs0Mb4cK4R_D44tzd0zkPM6UReqh8cehX1HpK9-wAgAjPkdIY7HIyvG00nLlp11wmIKp8&loadFrom=DocumentDeeplink&ts=89.12)):

Hi, Richard. It's a pleasure to be here with you.

Dr. Richard Russell ([01:45](https://www.rev.com/transcript-editor/Edit?token=p0xeXKTEyzy7Woj5PMdtfhiFIcQs_EDeURZTjGf0ZK9wG0KlXSF6Gn9ZtirHncVIzdcarcq4uJ7XEj39iSnI3qVyOGA&loadFrom=DocumentDeeplink&ts=92.55)):

Sinthia, would you like to introduce yourself briefly to the audience?

Professor Sinthia Bosnic-Anticevich ([01:48](https://www.rev.com/transcript-editor/Edit?token=TRLvpGJE3wvOgpojQ14_I7Z8kxvOTaQWzwS72HOD9b90TaMla7uw0f3yDPikU9ZDvWU-s78scvsTKGsXUrGUOIe_qbw&loadFrom=DocumentDeeplink&ts=98.2)):

So first of all, I'm a Clinical Respiratory Pharmacist, and really my research over the last 20 years has really been all around respiratory medicines, and how people use their medicines. Many years ago, it was focused on inhaler technique itself, but as you can imagine over the years, that has evolved into so much more. So, I'm really excited to be discussing this topic today.

Dr. Richard Russell ([02:11](https://www.rev.com/transcript-editor/Edit?token=wXuaDtICZlJgxts6Amf9__XFack3fmxAeoLIMN57vvsEQ0eeP5fcv9T5Q1S5_Ykf2Q7NLez_zEO61E8uj-HTUxsRjW4&loadFrom=DocumentDeeplink&ts=124.75)):

Well, it's absolutely brilliant to have you. What do we do when we prescribe an inhaler, and do we really pay any attention to it?

Professor Sinthia Bosnic-Anticevich ([02:18](https://www.rev.com/transcript-editor/Edit?token=ULEijnaQOVkTY0J9ZMrP9AyekM57yYqJr-XreIn-3Mzl33SwykmeUY2iRf2pc59qYOIqBy96KIijo-SAvf-gjXlzl_M&loadFrom=DocumentDeeplink&ts=148.28)):

Well, I mean, I think it's fair to say that as prescribers, there are a lot of things to consider when prescribing a medication to a patient, whether it be the first time or on review. And I think it's been promoted through guidelines that inhaler technique is very important, but whether the inhaler and the patient's ability to use that inhaler is a priority, or is one of the top few considerations when prescribing happens, I think we're not convinced that that's actually happening, even though we have plenty of evidence it's extremely important.

Dr. Richard Russell ([02:53](https://www.rev.com/transcript-editor/Edit?token=w7hk8A_6SUa_YchoEIRXNEXpR6LoSV6-1Yfg5lXi0l8EnbjqqVwOA2qijGFE5EV6UMsNj9Yw81gaC3Bnvu7wRiFoIPk&loadFrom=DocumentDeeplink&ts=189.89)):

And there's also certainly evidence that when you look at knowledge of healthcare practitioners, we really don't all understand our inhalers, do we?

Professor Sinthia Bosnic-Anticevich ([03:02](https://www.rev.com/transcript-editor/Edit?token=evUDJtM31f567fgds9U8vlxWrpIuEm769p7vH28Q6YGKZRlrfSAhV6qJmq74h1PrZG6KATdX_HbAn2JvszGr28nmrxA&loadFrom=DocumentDeeplink&ts=201.53)):

Absolutely. I mean, there are so many different inhalers, and they come with so many different combinations of medications within them that it does require some effort and focus on actually understanding the different types of inhalers. So, it's understandable, but it can be a problem.

Dr. Richard Russell ([03:18](https://www.rev.com/transcript-editor/Edit?token=lw3smozO5eodBWMyi7hdMLgJknRJqHu4YMGiZ0aahqk7lUPyEZtMEgqn9__e7gxKZpDtuVaMAsfL9HH2j2cwPGiGOJg&loadFrom=DocumentDeeplink&ts=221.07)):

One critical issue that's been raised in the COPD community lately, particularly with regards to inhaler technique and inhaler use, has been inspiratory effort. Perhaps you could introduce that to us, and tell us is inspiratory flow and inspiratory effort a problem for COPD patients? Because this can be a critical error when it comes to certain inhalers.

Professor Sinthia Bosnic-Anticevich ([03:37](https://www.rev.com/transcript-editor/Edit?token=p39oh1nrna1Zady41daaGA6ktocazUzD6Q-OtV_QuNpEw-kciBmzN1-Fa_HS5nf4tHmsRGBmvfs5pylGZ0p_tTJwSdU&loadFrom=DocumentDeeplink&ts=240.82)):

Yeah, so I think it's probably important to contextualise this inspiratory flow and inspiratory effort into what we understand about how a person uses an inhaler. And we've always been very aware that when you look at the checklist for how you use an inhaler, there's a number of steps there that relate to the breathing manoeuvre. And really, it's only relatively recently that we have concentrated on being able to measure that inspiratory effort or that inspiratory flow and started to study how that actually impacts on the patient's clinical status. So, it's really the first time we've started to look at the patient, and their breathing characteristics, and trying to match that to the inhaler.

Dr. Richard Russell ([04:25](https://www.rev.com/transcript-editor/Edit?token=ONJyQIYelgNE9auX5mzkLXmES8uuOY-nQGzmP7fkEXDsiphSGQEXxK5-aH5Tmorwlp98VfOuGaKe5qnrSiP4LI9OlK8&loadFrom=DocumentDeeplink&ts=289.56)):

And are there factors that patients have, whether it's age or maybe disease severity, that actually affect their ability to produce the right inspiratory effort?

Professor Sinthia Bosnic-Anticevich ([04:35](https://www.rev.com/transcript-editor/Edit?token=QQkr1UrCm3SrkrrG9omkr61WADawWnH7ap-ev7MRrnx5C9QNHUcMglTQXGtDJ9I0VU9TFU5M5ov9qk37ZF5C8KV6UwI&loadFrom=DocumentDeeplink&ts=301.1)):

Yes. Well, age, height, sex, the status of the patient's COPD at the time, all those things can impact on a patient's ability to generate this inspiratory effort.

Dr. Richard Russell ([04:53](https://www.rev.com/transcript-editor/Edit?token=IX5RmVN_rVg-XafvbmMSBYb9rCxv0WEZw8Giv9KeiN3qgH0aN0eQJPglf2ZUoFSyUTLmriH252ju25y494z6xxJtSiA&loadFrom=DocumentDeeplink&ts=318.07)):

So, there's a difference actually between when someone is in stable state and when they're exacerbating?

Professor Sinthia Bosnic-Anticevich ([04:59](https://www.rev.com/transcript-editor/Edit?token=7oBjKjcRIoZqEAZ_k8VsDfGOF5O_5DxwP1bvaZwjuTOp44q7UvG7QyRIurIUdA3A5elYLFsCfiPrXpVoFCLJRhz7Qis&loadFrom=DocumentDeeplink&ts=323.8)):

Yes, we certainly know that there is a difference in their respiratory status, and this is really where it becomes critically important that we understand how that patient is going to be able to interact with their inhaler, not only when they're stable, but when they're unstable prior to an exacerbation, during an exacerbation, when they're coming out of an exacerbation. They need to be able to get the dose of medication. If they can't, obviously, we're going to have a problem.

Dr. Richard Russell ([05:26](https://www.rev.com/transcript-editor/Edit?token=DXNiZGeckHCYQdnAAcDhdR3xwH0hc8FFz3aA6OsagtpDYzRCXAit7RqZtn1rs6aa3WCiczI2TPTTrK0DJ_331ejpf8U&loadFrom=DocumentDeeplink&ts=354.49)):

So, let's move on to talk about inhalers, and broadly speaking, we have three classes of inhalers, dry powder inhalers, metered dose inhalers, and Soft Mist Inhalers. Can you tell us about the impact those different types of inhalers have, and how that works with inspiratory effort?

Professor Sinthia Bosnic-Anticevich ([05:44](https://www.rev.com/transcript-editor/Edit?token=Ssj03Z0vj7gL3o5uIAPoEtQtiEiTDD5BhxFexHgy1OYGKU42NbcgHmz0PooQ5Ek1obh9Jr6egzPrutaZSf1ifdLia0o&loadFrom=DocumentDeeplink&ts=371.36)):

So, these three different types of inhalers are obviously divided into those three groups because of the technical features. And those technical features then translate into how a patient needs to use that particular type of inhaler. So, you mentioned dry powder inhalers, metered dose inhalers, and then the Soft Mist Inhaler. And one of the important differences between these three types of inhalers as it relates to inspiratory flow is about how the drug is going to be released from that inhaler.

Professor Sinthia Bosnic-Anticevich ([06:19](https://www.rev.com/transcript-editor/Edit?token=h_HT2QGndGxXjwGzPKgRYdk1pMYT-lcDelZdo5N2FTrePo8KGCJ3F72EiQrvpTfbB48DB_SLk1OOrTPAjnteRXq5W1M&loadFrom=DocumentDeeplink&ts=408.38)):

So, with the metered dose inhalers and with the Soft Mist Inhaler, a patient has to press a button, or click and a dose of medication will come out of that inhaler. But with the dry powder inhaler, the dose being emitted or coming out of the inhaler is dependent on the patient's inspiratory flow. If a patient does not generate sufficient effort when inhaling, a small dose or no dose potentially is going to come out of that device. So, this is really a big difference between the different types of inhalers.

Dr. Richard Russell ([06:53](https://www.rev.com/transcript-editor/Edit?token=R6LucoFXUzPu6ScNj_3e-cd_bE8KkzQIR48NbRcV2-cPFZvIkH4hyFczCArqatsLc5mUWSO50Osj7QnJc4KlO8SU_tQ&loadFrom=DocumentDeeplink&ts=443.24)):

And do those differences in any research translate into clinical differences, clinically meaningful outcomes?

Professor Sinthia Bosnic-Anticevich ([06:59](https://www.rev.com/transcript-editor/Edit?token=TolK_KqTT_AJ9awMh4Ea2cn_xp4qpweDm_7N9hedh2mWqdMsaORVkFg63aSdCauPX_nASktovVj5IMjEMxt9brMTCfQ&loadFrom=DocumentDeeplink&ts=452.04)):

Absolutely. Studies have been done in dry powder inhalers, because of what I just described, that unless a sufficient effort is generated, there will be minimal, or no dose delivered. And the evidence shows that there is a link between a patient being able to generate sufficient inspiratory flow with the use of their dry powder inhaler and clinical parameters.

Professor Sinthia Bosnic-Anticevich ([07:21](https://www.rev.com/transcript-editor/Edit?token=g0qvHT3yvlJLA46gldJ2QQoGS_l7UWoRrYT-OpEnoguFyhYjAEiwe8qpLSyxrkx3GaA_VKtoXWhvBaMcUM2TUGW-xNc&loadFrom=DocumentDeeplink&ts=487.48)):

So, for example, a study, which was published in 2017, looked at patients who had been hospitalised for a COPD exacerbation, and it was found one of the predictors of them being readmitted to hospital was whether they actually had a sufficient inspiratory flow for their particular dry powder inhaler. And now we're actually doing studies more in primary care to see how the inspiratory flow and the device used relates to patients in primary care.

Dr. Richard Russell ([07:53](https://www.rev.com/transcript-editor/Edit?token=q6Y_cEMztZ1KHl3Qsb5FBwzFfbj23fI5dVZV9AGYZQlBcmxvjn-yIIMXdekmTaTG2ZMfwVyU1VJ5ipEs7f24jaDswXY&loadFrom=DocumentDeeplink&ts=530.76)):

Now, one of the studies that's recently been designed and performed you've been involved in. It's the PIFotal study. I know this has not been published quite yet in full form, but maybe you can tell us a little about this study, and maybe what we might learn from it.

Professor Sinthia Bosnic-Anticevich ([08:10](https://www.rev.com/transcript-editor/Edit?token=x19sqmFcnKPkXfusZiEvmb4nm7QozZF9clOqiD2_fSJfInbd3rc3BFi7dkrOiI_t1zNZtrxmcS3b4hhbif0b4_ueYYg&loadFrom=DocumentDeeplink&ts=546.21)):

Yeah. So, I think it's a really important study, which will really have relevance to all prescribers in all healthcare settings, not just those that are in tertiary care, because it focuses on patients in the community who are not experiencing an exacerbation of COPD. And it's an observational study in the real world setting to try and identify the relationship between peak inspiratory flow, and health status, and exacerbations, as well as some other factors, such as healthcare utilisation and looking to see the relationship between inhaler technique adherence and these outcomes. So, it really is an important study, which will give us insight into peak inspiratory flow.

Dr. Richard Russell ([08:59](https://www.rev.com/transcript-editor/Edit?token=7K8hYPp2j9wLRGZORBexc_lpgvmLtFt7gjh2VsWoSUXMYFS1AjwEYI_jugLHpRPDvO5bZXTPs_oXmOba2lEpzkD1RM8&loadFrom=DocumentDeeplink&ts=599.59)):

And what are you hoping that this study actually will show?

Professor Sinthia Bosnic-Anticevich ([09:03](https://www.rev.com/transcript-editor/Edit?token=hFYRgSYBHgEn-yLSoiSeB3CyC505QWBDLXZbGUBdA8K4PyMazn3GJ9PXuLJuDHq7-4Uh1n64YwSQc5tJSu6PF1jkS_w&loadFrom=DocumentDeeplink&ts=603.99)):

Well, what we're hoping to be able to, first of all, characterise is to identify the proportion of patients who actually have suboptimal inspiratory flow. So, I think it's important to just mention that up until now we really haven't been able to measure inspiratory flow in day-to-day practice, we have been observing people to look to see whether they seem to inhale deeply enough or fast enough, but it's only really when we take that measurement that we can identify what the peak inspiratory flow is.

Professor Sinthia Bosnic-Anticevich ([09:38](https://www.rev.com/transcript-editor/Edit?token=Cms8vqdjlrMolapRrayNq2trLbOL5Xm9K7eMzv4GgLNdeAn-1_uuI_l8nmLE6etJR8yyjBN9U5BmMNpRKp8gfyk9t-Y&loadFrom=DocumentDeeplink&ts=643.54)):

So first of all, we're looking to characterise how big a problem is this. There's some suggestion from studies that have been done with digital devices that it may be even up to 30% to 40% of people who might have a problem in not being able to generate sufficient in inspiratory flow. So, we're going to identify how big a problem it is, and then we're going to look to see whether we can train people to generate sufficient inspiratory flow, or whether there are some people that simply for whatever factors are not able to do so, and we really need to consider a different device. So, they're the main things that we're really looking to understand.

Dr. Richard Russell ([10:18](https://www.rev.com/transcript-editor/Edit?token=mYDVOlKnvALzd3XNxlR98fJQhMUPcjSG-l-pRWZgzXoDeDFd7GeV37y09lb_mJzOUkZ8DyO3R4HS19JoihFrhItiuXg&loadFrom=DocumentDeeplink&ts=684.1)):

That's really helpful. And another aspect I'd like to just ask you about, because I know you're also an expert in this, is understanding the whole idea of adherence. So sometimes, as you've just said, there are real practical problems with people being unable to use an inhaler, because they can't generate, for example, an appropriate inspiratory flow. They need a different device, but there's more to adherence than this, and are there any other things that you'd like to say that would need to drive adherence positively?

Professor Sinthia Bosnic-Anticevich ([10:47](https://www.rev.com/transcript-editor/Edit?token=QVxcGaCXr3a5Ak0iTooPixI5kzXAZjPO95SAMCUm5-swkxzI53yCWBpmEx36sVUQzmGwoNo5mzbskg1XKDPKRUJO1ag&loadFrom=DocumentDeeplink&ts=714.67)):

Yeah, I mean, I think it's really important to have or to consider adherence, and how the patient's ability to use their inhaler, or their perception of whether their inhaler is effective and safe impacts on their likelihood to use their inhaler. It's actually surprising how many patients will live with poorly controlled disease or symptoms but will still be nonadherent. There is a high proportion of people, even though they may be having symptoms, who are not using their inhalers. And we haven't really measured what is the impact of their ability to actually feel like they're getting a dose, or feel that there's an impact of that medication on adherence, but it's important to consider that and have that conversation with patients.

Dr. Richard Russell ([11:40](https://www.rev.com/transcript-editor/Edit?token=HvmUUhs0LOqCFknbYYaP4Agibe2FgMk8sV7TGMjSt2vBYR65ASzT2pihyVgXj9Es3jrVr1bukiQ3PYTZBDPGgLMJkx0&loadFrom=DocumentDeeplink&ts=780.79)):

I think that's really helpful and a really positive tip. Coming back to suboptimal inspiratory flow, another study that was recently published was the TRONARTO study. And this obviously suggested there's a solution to this problem.

Professor Sinthia Bosnic-Anticevich ([11:52](https://www.rev.com/transcript-editor/Edit?token=PcGiTP4MmuS1LJn2sDDc1mF7KlXtePujWXgWpB1SgTcA504c2xyFGO8KxdghAe1QxKp-iCGipGrmN4kFGfy3kIaOikU&loadFrom=DocumentDeeplink&ts=793.94)):

Yes, absolutely. So, the study actually looked to see where the patients who had moderate to severe COPD, and who were able to generate different amounts of inspiratory effort to look to see whether if they were put on a different inhaler, like a Soft Mist Inhaler, whether that actually impacted on their clinical outcomes. And really what the study authors found was, that regardless of inspiratory flow, patients had benefit from using a Soft Mist Inhaler, which really shows that it is not dependent on inspiratory flow.

Dr. Richard Russell ([12:30](https://www.rev.com/transcript-editor/Edit?token=n7Ly-VAYduyLcPMxlP1DpQxBe8VTChS57cS4QAXeiFsLQrwnLkJAu8vhpeEE1ia8lzu9mu0K_o3ZeiReINTGy6aDdtg&loadFrom=DocumentDeeplink&ts=839.21)):

Let's come now to guidance, and the GOLD Strategy, for example, you've mentioned how guidelines are now mentioning inhalers, whereas previously they've often not mentioned them at all, and it's great to see them mentioned in the guidelines now, but what do they say, and do we still need more from our guidance and our strategies to be clearer about use of inhalers?

Professor Sinthia Bosnic-Anticevich ([12:51](https://www.rev.com/transcript-editor/Edit?token=IZzbJdpGHwiJYg9qZ2mJ5qi6gl9k-SqiMEIaIK8M0egpOJLIkCNjCbl8gkJTxMPXbI6Oi1-_vNApr9W_pztGEmPjFQk&loadFrom=DocumentDeeplink&ts=862.01)):

Well, as you say, there's a lot of mention of inhaler technique, and there's a mention of selection of inhaler but I think there's not specific guidance about how to deal with it in practice. And, of course, it's important to have that framework that the guidelines set, but then there's also that very personalised element that needs to happen when patients are being prescribed their inhaler. We really need to understand and feel confident that if a particular inhaler is being prescribed, that patient will be able to use it not only at that point in time where we show them, but when they go home, and have to use it on a daily basis when they're well, but also when they're not well. And I think that's the thing. Do we feel confident that that patient will be able to use that inhaler when they go home? So, unfortunately, it's not just I'm going to pick this inhaler, because I'm used to it, I'm familiar with it. It really does need to be personalised for the patient.

Dr. Richard Russell ([13:59](https://www.rev.com/transcript-editor/Edit?token=5QTCF7S3HW7_SbgMqvscHUrZms5q2A_pm_LLSqr-Kd0j5EzfR7gc74zBqyYXILsDmcTzGEra24m7la10TjEbmi0I_U0&loadFrom=DocumentDeeplink&ts=937.3)):

I think that's a really important point, and absolutely critical, and really requires us individually to have a little bit of thought about the patient in front of us, and about our knowledge of the inhalers and the medications we have. A final thing just briefly to discuss is about environmental impact and there's a drive now throughout the world to reduce the environmental impact of inhalers, and we all need to do our part to reduce and prevent global warming. What are your views on that?

Professor Sinthia Bosnic-Anticevich ([14:28](https://www.rev.com/transcript-editor/Edit?token=JkuIoyvhpApIPp88UK6BU75AQPhOfP6oarjoxaoZlLbmEoaaw4sIzdUCAH8DGuG9W7M7l_ZbF6ErKICU-e3rNM0CyeY&loadFrom=DocumentDeeplink&ts=972.61)):

Mm, well, I guess there's two things to consider. First of all, those inhalers that might generate an aerosol, out of the three different types of inhaler classes, it's the metered dose inhaler that have the aerosol. So, some might say, "Well, that's obviously going to be one of the potential issues with the environment," but then the other thing is really is the device reusable? And really, I mean, the Soft Mist Inhaler is a reusable device in which you do sort of change the canister. So, there are differences definitely in the way in which these inhalers are designed and their impact on the environment.

Dr. Richard Russell ([15:12](https://www.rev.com/transcript-editor/Edit?token=Udpq1gMAt-BllXoKVFuqk_aFnp1vFS5TR57uKThcUN6zmJpbOmyT4auPim7J1aLUKz_OspOON9uCphyHNikxQL-xoJU&loadFrom=DocumentDeeplink&ts=1064.25)):

So, let's summarise, Sinthia. I want you to give me two or three key points that you want our listeners to take away to actually put into practice to think about inspiratory flow, devices, and better adherence for our patients. Go for it.

Professor Sinthia Bosnic-Anticevich ([15:25](https://www.rev.com/transcript-editor/Edit?token=nXEOGYrz2B-EDb00LXbjPzRkTr4bHebSYGSIX6SOqBqGxJBxnSe3Os6wrltWf9_4MvbzcNXb0GPuoiXQ0gGb4RTZj-E&loadFrom=DocumentDeeplink&ts=1086.63)):

Okay. So, I think the first thing is for prescribers and healthcare professionals to be very aware of the fact that there are three different types of inhalers, and to understand the differences between them. And then the second thing is really when a patient is in front of them to really consider what are the particular characteristics of that patient that may make them better suited to a particular inhaler type, and especially if it's a patient that you think is quite unstable, where their COPD and their respiratory status is going to change over time. It'll be really important to send them home on something that you feel confident that they will be able to use both when they're well, and when they're unwell. And I really think a device which is not dependent on peak inspiratory flow is therefore one to consider there.

Professor Sinthia Bosnic-Anticevich ([16:23](https://www.rev.com/transcript-editor/Edit?token=Nq9-WbfACfHI3TGA81RZyp1zuU5z9mXX7YyD0FxyUmS_LH31HI-jqXuiPJjaqzvYbxWqzwEfZNLMKQLd7gHrgw-Yne8&loadFrom=DocumentDeeplink&ts=1144.81)):

And so, then the other thing is patients often don't understand the importance of their inhaler, how they interact with their inhaler. Being aware of that can make a difference to the way in which they're treated or the medications they're prescribed. So, I always think it's really important when training a patient on how to use their inhaler, that the patient understands why they need to do certain things with that inhaler. So that they actually go home and focus on the right manoeuvres when they're using that inhaler, and that they can come back to their prescriber, their doctor, their healthcare professional, and actually give them feedback on how they're going with that inhaler.

Dr. Richard Russell ([17:06](https://www.rev.com/transcript-editor/Edit?token=gIE-WfoBMdf-xBe39ndKw1043Y0ulJf0aSCftNJSgXx69M5bAqJJqZX8WjJ2fq8r2RXxkpuv_tMTlPzy27NDYrsTv4A&loadFrom=DocumentDeeplink&ts=1190.18)):

Brilliant. Professor Sinthia Bosnic-Anticevich, thank you very much for joining me today. It's been a huge pleasure.

Professor Sinthia Bosnic-Anticevich ([17:18](https://www.rev.com/transcript-editor/Edit?token=CokYRIXllxAMVPkBOIT7eiqdUYsWWubkqx1mvAc2zP9hXsigYJbW7ch73UOpRi91Fi5epWu4buvp4h1dy2uhVkgOjUU&loadFrom=DocumentDeeplink&ts=1197.3)):

Thank you very much for having me, and I look forward to seeing you soon.

Dr. Richard Russell ([17:23](https://www.rev.com/transcript-editor/Edit?token=c05Femwmt02VZZ8Y6SfKSoVyWcuX3nOF3MKwBVSoTGTHwMtjSaylwmUn7oIYbCajdMrdqqxSfMapHOTgNkMyh3OjHYs&loadFrom=DocumentDeeplink&ts=1.81)):

In a moment, I'm going to talk about an exciting and important hot topic for COPD patients, the issue of fatigue. But first, I want to unpack for you a new and interesting paper. This has been published in the *American Journal of Respiratory and Critical Care Medicine*, Volume 205, Issue Four, by Putcha et al. It's entitled, ‘Home Dust Allergen Exposure Is Associated with Outcomes among Sensitized Individuals with COPD’. So why is this important? Well, we know environmental exposures are associated with adverse outcomes in COPD. One third of all patients, we believe, are probably sensitised to some allergen. So, this group looked at indoor allergens and symptoms and subsequent risk of COPD exacerbations measured in a longitudinal fashion. They took 183 ex-smokers who've got COPD and measured five allergens in their home, and then also measured to see if they were sensitised to these allergens.

Dr. Richard Russell ([18:20](https://www.rev.com/transcript-editor/Edit?token=c05Femwmt02VZZ8Y6SfKSoVyWcuX3nOF3MKwBVSoTGTHwMtjSaylwmUn7oIYbCajdMrdqqxSfMapHOTgNkMyh3OjHYs&loadFrom=DocumentDeeplink&ts=1.81)):

 So, what were the results? 77% were exposed to an allergen, 17% of which were sensitised to that allergen. If you were sensitised and had been exposed, this was associated with a reduction in lung function, an increase in symptom score as measured by the St. George's Respiratory Questionnaire, and most importantly, an increased risk of exacerbation with an odds ratio of 2.31. So, this is really interesting and exciting, because actually, we could potentially modify the home circumstance of an individual to reduce this allergen load, prevent sensitisation, and thus reduce the risk of exacerbation. This group have done this. They've modified the home circumstance and shown, by the use of highly efficient filtration devices to clean the air and clean the environment, a reduction in exacerbations was seen, but a modest one. So, this needs to be taken further forward to really affect people who are sensitised and who are having frequent exacerbations.

Dr. Richard Russell ([19:29](https://www.rev.com/transcript-editor/Edit?token=6RW6RMJiROW7ewgmSdxzx9mml3QLS_7DirZH47qPl0ZajnBzGij00q3kx-OA3nqOxHVKfeObsUf3LO8MWjAHbWkDwF4&loadFrom=DocumentDeeplink&ts=1.73)):

So, let's finish off by talking about an important topic in social media. We're going to talk about fatigue. This is very relevant for patient and a real problem. This had been very hot on mycopd.com and also on Twitter. Physical activity seems to help, and we think this is a solution, but patients say, "You know what? Working out makes us feel better but adds to fatigue." They come up with their own solutions. Maybe don't talk while walking; maybe nap after light meals; maybe shoes that they can put on without bending over. They certainly talk about starting simple and building up their activity and get other things in that sort them out so they're actually making sure, for example, that they sleep well. Other patients are suggesting drinking particular drinks sometime in the morning. Turmeric and black pepper, for example, and honey and cinnamon at night to help with this. Whatever the issue is and however we can help, it really involves us paying attention to the individual, listening to them and helping them find the right way forward. And there's plenty of help on the internet and social media for them in this way.

So, thank you for joining me today on this episode of Medical Insider COPD podcast. I hope you've enjoyed yourselves. I hope you've learned something and it was a great pleasure working with Professor Sinthia Bosnic-Anticevich talking about inhalers and the need for measurement of inspiratory flow and also getting the inhaler right. We unpacked a new paper which looked at allergens and COPD. Then finally, discussed fatigue. Look out for the next edition of Medical Insider COPD podcast and I look forward to you joining me again.