**7 steps to good inhaler technique – from a podcast between Garry MacDonald and Dr. Mark Levy**

The first step you do, you will prepare the inhaler device. Now that can mean twisting it, pulling it, opening it, flicking it, whatever's particular for that device to prepare the device to open it, to ready it for it to be used.

The next stage would be loading the dose. Now, some inhalers, preparing the inhaler and loading the dose is integral and it's one step in itself. But others you might have to put a capsule in there. Some you might need to twist it to drop a powder down. Certainly with MDI or your pressurised puffers, you would need to shake them beforehand as well. That is very important. So they're all preparing the device and preparing the dose is all particular and unique for each one as well.

The third step we do is I explain to patients that they need to breathe out first. Breathe out fully, away from the device. And this is probably more important if you're using a dry powder. Because by its very nature, it's a dry powder. If you breathe out, your breath is hot, wet, moist, humid, and if you breathe that into a dry powder, it just coagulates and sits in a big lump. It's like if you're mixing up a nice roux, if you're a good chef, when your flour gets lumpy, that's what happens to it as well with your hot, wet, moist breath. So breathe out. And you need to breathe out, because if you don't breathe out, you can't breathe in. So breathe out fully and gently away from the inhaler. When you've done so, bring the inhaler up to the mouth, make a nice tight seal around the mouthpiece, seal the lips around it and begin to start breathing in.

Now before we get to that stage, this is where we deviate. So we've got two different types of inhalation type, and this is really important, and a lot of healthcare professionals don't understand this and maybe not even aware of this. I see it with a lot of patients. They have either a meter dose inhaler or a dry powder, and they're using the exact same inhalation technique for both, which is incorrect. So let me break it down. If you have a meter dose inhaler, it's coming out probably between 60 to 70 miles an hour. Now for that, we need to slow down. If you think about it, it's 60, 70 miles an hour. It has to go around a 90 degree bend at the back of the throat. If you're driving at 60 or 70 miles an hour, you would want to slow down if you're going around a 90 degree bend. So that's why we slow that down. Very slowly, probably down to less than 60 liters per minute.

And for me, how I teach my patients that, is that should be about four seconds to breathe in fully. If you put a wee timer on, and I say if you breathe in fully before the four seconds is up, you're breathing in too fast. So I let them feel what that speed looks like. And that slows it down. Ideally, if patients ever played any ball sports like soccer or netball or anything like that, when you go to catch a ball, you take the speed off the ball, and that's what we're doing with the meter dose inhaler, is slowing it down, taking the speed off it. And as you start to breathe in, that's when you would actuate the device. You've probably got between four, five seconds to continue breathing in with that as well.

Now hold that there as well. If you have a dry powder inhaler, the key to that is actually the device has no energy at all. If you prime the device and prime the dose, it just sits there really lazy. So as a patient, you need to give it energy. So for those, you need to give it a very hard, fast forceful breath and a continuous breath in as well. So the exact opposite of what a meter dose inhaler would be. Meter dose inhalers, again, they come out very fast, we need to slow them down. Dry powder inhalers are very lazy, they sit there, we need to give them the energy. So once you've taken your breath in, we're back on the same track again for both inhalers. You would remove the inhaler from the mouth, and you ideally would hold your breath for about 10 seconds. Now I would also say to patients, ideally 10 seconds, but whatever's comfortable for you. If you're having an asthma attack, I wouldn't expect a patient to hold their breath for 10 seconds. Whatever's going to be comfortable for them.

And then our seventh and final step is, I would wait about 30 seconds to a minute before, if we need to, taking a second puff. So if you've been prescribed two puffs, then you would wait about 30 seconds to a minute for the next puff. And also if you have a reliever inhaler, like your blue Salbutamol or your Albuterol, I also say this to patients, that just wait, you might not need to take a second puff. Patients shouldn't necessarily be preconditioned to think I have to take two puffs, I have to take two puffs. And what it's certainly not is two puffs right after each other. It's not two puffs on the same breath. That's really important.

I would always think it was to do with the receptors and the lungs, but actually it's to do with the physio-chemical principles of the nozzle of the inhaler. As you depressurise it, the liquid turns into a gas, and the tip of the nozzle of your inhaler drops below freezing. You need to wait about 15 to 30 seconds for it to come back up above to room temperature. So that's the reason why we would wait. And more often than not, if you're using your blue inhaler, you might not need to take that second puff, which is really important. So that's your seven simple steps courtesy of Anna Murphy. And they're a bible for me, and certainly when I'm doing it with patients on the phone, I explained why they're going to do it. And I try and listen for the clicks and the breaths with the patient as well. Hopefully if you're listening to this as well, you'll have picked up on that.