



Spirometry

Trainee: Hi, I'm Zoi and I'm the Specialty Trainee. We are going to do a breathing test today called spirometry. We've done the height, weight and BMI previously and we have inputted it into the system here. I will explain to you the process, I'll demonstrate the procedure and then I'll ask you to do the test. OK? We do 2 sets of tests. The first one is a vital capacity, which will measure how much air you take into your lungs. And the second one is the forced vital capacity, which will measure how much strength there is in your lungs. We will also do it 3 times. We repeat it 3 times because the more we do the test, the more your lungs will open up... and we will also be looking at the average of these 3 readings.

I'm just going to attach the mouthpiece to the instrument.

Remember to hold the instrument like this and don't block it at the back. Form a nice and firm seal around the mouthpiece so no air is leaking. For the first test, which is the vital capacity I want you to keep a nice tall posture because in this way your lungs have a full capacity, take a nice deep breath and blow in at a slow and steady pace until you empty your lungs.

It should be something like this. Nice deep breath and here we go.... (trainee demonstrates).....and keep going until you feel there is nothing left in the lungs. OK? Any questions?

Client: No.

Trainee: Right. That is the machine ready for you now so I will hand this over to you and when you are ready..... Nice deep breath.....Keep going, keep going, keep going..... Well done.

Now we will need to do this 2 more times.

So, give it just a minute. That's ready for you again. Nice deep breath... keep going, keep going, keep going, keep going, keep going, keep going. Very well done.

Third time, that's fine, that's it ready.

Well done. That's excellent. Are you alright?

Client: Yes

Trainee: Ok. We will move on to the forced vital capacity. This is to measure the strength in your lungs. Same principle... tall posture, deep breath but I want you to strongly exhale initially and then keep going until you feel there is no more air left in your lungs. You might not make any sounds of air coming out but there is still something so please keep going for as long as you can after the strong exhale.

It should be something like this...

Nice tall posture, deep breath and here we go... (trainee demonstrates)... and keep going for as much as possible.

Ok, this is ready for you.

When you are ready... keep going, keep going, keep going.

Fine, that's ready for you, for the second one... keep going now, keep going, keep going.

And the last one, nice deep breath, keep going, keep going, keep going.

Well done. Thank you. Are you feeling fine?

Client: Yes.

Trainer: That's great Zoi. Can you talk me through the findings?

Trainee: Yes, the ratio is reduced so it's indicating airways obstruction.

Trainer: Ok good, this lady works in the animal house at the University. What might you be worried about?

Trainee: I think that might be an indication of occupational asthma. I would like to explore more about the symptoms and also see what she is exposed to at work

Trainer: OK, good. Are there any tests that you would like to do?

Trainee: Yes, I would like to measure the IgE and also I would recommend PEF readings both at home and at work.

Trainer: Good. Do you know how often we ask the patient to perform the PEF and for how long?

Trainee: I'm not sure.

Trainer: OK that's fine. We usually ask the patient to try to take measurements every 2 hours from waking to sleeping for 4 weeks... but often that's not practical and we need a minimum of at least 4 evenly spaced readings per day. Do you know how we analyse the results?

Trainee: Yes, that is computer software called OASYS.

Trainer: Yes, well done.