

The following factsheet has been designed to support you as you progress through your spirometry learning. This factsheet will be provided to you every month after each tutorial.

New to the programme?

Please ensure that you have viewed the meet and greet video for those of you working through the Spirometry Online blended learning with ARTP and the Spirometry Refresher Programme with ARTP.

Support Available

We have changed the way you can contact us to ensure your questions and queries are managed effectively. If you have a question or query, please can we ask that you access the following link and complete the form rather than emailing us. A member of the team will contact you. Alternatively, you can use the form if you would like a particular topic to be covered at the monthly tutorial.

https://forms.office.com/Pages/ResponsePage.aspx?id=VsTAAthQqkWkgjh96Vc-WY9ZFgW_JFBDmuyqYm8_KopUMTBUNIIJMVVVRTZXSDY3R0JCQ0xJUDZKVC4u

Your monthly tutorial

We are continually looking to review the way in which we deliver the course. We want to ensure that each monthly tutorial is catered to the learning needs of our learners. Therefore, we are changing the names of the tutorial so that you can be really clear around which tutorial you would like to attend. These will now be:

- **Performing**

These sessions are designed to provide you with an overview of how to perform spirometry. Here we will be discussing key components such as

calibration and verification as well as providing some key hints and tips to support your patient getting ready to undertake spirometry.

- **Performing and Reporting (interpreting)**

These sessions are designed for those learners who will be involved in performing spirometry and reporting (interpreting) on spirometry traces. We will cover a step-by-step process on how to report (interpret) a basic spirometry trace. You should attend this tutorial if you are confident on performing spirometry and are ready to report (interpret) a spirometry trace.

- **Reporting and getting ready to undertake your ARTP certification**

These sessions are designed for those learners who are nearing completion of their spirometry eLearning and are ready to apply for their ARTP certification (assessment). Within this tutorial we will be covering how to report (interpret) more complex traces and providing you with hints and tips to the ARTP certification process.

Please ensure that you have attended the performing and performing and reporting tutorials.

Occupational Health

These sessions have been designed for those learners who are operating outside of primary and secondary care and are currently operating in the following area of practices Army, Ministry of Defence and occupational health settings.

Which tutorial to attend?

These tutorials are rolling and therefore as you work through your programme, you can move from one tutorial to another so for instance you can attend the performing tutorial initially. Once you are confident with performing spirometry then you can attend the performing and reporting tutorial and so on.

There will be an opportunity to ask questions during the monthly tutorials; any questions that may come in advance and are not covered on the rolling programme, will be addressed on the day.

How to work through the Spirometry Online blended learning programme?

The Spirometry online blended learning programme consists of eLearning units and monthly tutorials. We encourage you to work through the chapters in a linear format so that you gain a thorough understanding of the spirometry process. Depending on your role in spirometry you may wish to spend more or less time on some chapters versus others. Please check your welcome pack for further details. **Please note this does not apply to those of you on the Spirometry Refresher programme.**

I am completing the Spirometry Blended Online Programme with ARTP certification. Do we have to complete the eLearning before we access the ARTP certification?

Education for Health's learning is independent of the ARTP assessment. We would recommend that you apply for your ARTP once you have completed all the eLearning chapters and have undertaken practical training in your area of practice.

Frequently Asked Questions (FAQs):

The Association for Respiratory Technology and Physiology (ARTP) have put together a number of FAQs: <https://www.artp.org.uk/Spirometry-FAQs>

Spirometers

If you have any questions around spirometers, we encourage you to contact the manufacturers in the first instance. Education for Health does not endorse any particular spirometer for use in the clinical situation. For advice re: suitability of spirometers, please refer to the manufacture's website for detail of the variety and performance of their products.

Questions from 20.06.24 on-line Tutorial

Q 1. Please can I ask about the implications of a slow start in spirometry. I am struggling to find the impact of this, other than it can falsely raise an FEV1.

Please see the following resources available online:

<https://www.lcnuk.org/sites/default/files/Spirometry%20feb%202018.pdf>

<https://www.lovedmedical.com/insights/5-common-mistakes-when-performing-spirometry/>

<https://geekymedics.com/spirometry-interpretation/>

Q 2. How important is it for biological variation tests to be at similar time each day? I'm struggling to always fit them in the morning, consequently more likely to be further apart in days.

The ARTP Statement on Pulmonary function testing (2020) obtain 10 measurements over 10 sessions on consecutive working days. There is no reference to the same time of day.

Sylvester KP, Clayton N, Cliff I, et al. (2020) ARTP statement on pulmonary function testing 2020. *BMJ Open Resp Res*; **7**:e000575. doi:10.1136/bmjresp-2020-000575

Please see the recently published ATS/ERS European Respiratory Society/American Thoracic Society Technical Standard on Standardisation of the Measurement of Lung Volumes - 2023 Update, for more information.

<https://erj.ersjournals.com/content/early/2023/07/20/13993003.01519-2022>

Q 3. Is there anything we need to do if our spirometer doesn't show the fev1 /vc?

Please contact manufacturer to see if this is a settings issue. It is important to be able to identify the ratio with the larger of the capacity results which may be the relaxed capacity.

Q 4. Do you only have to have one abnormal z score?

There is a recognised difference between reporting the results and interpreting the findings. Any abnormal z-score will warrant further investigation. For demonstration of an obstructive pattern and classification of severity using the z-score, please see ARTP Spirometry Standards Document for more information.

<https://www.artp.org.uk/write/MediaUploads/Training%20and%20Development/Spirometry/ARTPSpirometryStandardsV6Feb2024.pdf>

Q 5. Is the 12% AND 200ML IMPROVEMENT both in FEV1.

BTS/SIGN (2019) “In adults with obstructive spirometry, an improvement in FEV1 of 12% or more in response to either agonists or corticosteroid treatment trials, together with an increase in volume of 200 ml or more is regarded as a positive test.”

NICE (2021) “Offer a BDR test to adults (aged 17 and over) with obstructive spirometry (FEV1/FVC ratio less than 70%). Regard an improvement in FEV1 of 12% or more, together with an increase in volume of 200 ml or more, as a positive test”.

Q 6. When I do biological variation 10 tests if I have done tests more frequently than 30 second intervals on myself will these be rejected.

The ARTP Statement on Pulmonary function testing (2020) states:

“A minimum of 30s should be left between repeat attempts to allow the patient, particularly those with airflow obstruction, to recover”. Demonstrating that you have waited for the 30 seconds shows that you have had the minimal time to recover. It is important that your results are quality assured and meet the repeatability criteria. Not waiting the full 30s for recovery time in a healthy individual is unlikely to be rejected, though a comment may be made.

Q 7. Do you need to reference your answers on the portfolio?

Referencing puts your work in context, demonstrates the breadth and depth of your research, and acknowledges other people's work. There are areas of the portfolio that will need referencing such as your protocol. Please see ARTP FAQ for more information re: portfolio requirement.

<http://www.artp.org.uk/spirometry-faqs>

Q 8. For the spirometry SOP I have used the ARTP SOP and edited it. I have removed things that are not relevant to our practice and added relevant things for our surgery, is that ok? I have said that it is adapted from ARTP SOP.

The ARTP SOP states in the document:

Scope and Aims

“This document covers a standard procedure which can be utilised in any healthcare setting where spirometry is performed. It is intended as a basic guideline that can be adapted alongside local protocols”.

Q 8. Would you fail the portfolio if you use GOLD 2023 reference instead of 2024?

If the comment is replicated in the 2024 GOLD strategy and has not changed since 2023, it is possible a comment will be made of the importance of citing current strategies and guidelines.

Q 9. do we have to have a certain declaration of work or make our own? I can't see anything on ARTP website.

The Declaration of Own Work form is available in your PebblePad portfolio to download.

Q 10. I just need to clarify that after performing spirometry we look at the FEV₁/VC % or FVC (whichever is greater vc or fvc), check it against the LLN %, if lower we look at the FEV₁ Z-Score to determine the severity of COPD.

If using the European Community of Coal and Steel (ECCS 1993) reference equations i.e., fixed ratio, you will look at the VC or FVC whichever is greater, as this reflects the capacity. You look at what the patient has achieved, what is their actual ratio, for instance is it less than 70%.

If using the z-score, using The Global Lung Initiative (GLI 2012) Severity classification in airflow obstruction is again a two-stage process:

- 1) The FEV₁ /FVC (or FEV₁ /VC) must be below the LLN (z-score <-1.645) to be classified as obstructive.
- 2) Severity grading is then based on the FEV₁ z-score.