

Spirometry Factsheet – July 2023

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_KopUMTBUNIIJMVVVRTZXSDY3R0JCO0xJUDZKVC4

Your monthly tutorial

You can choose from three different spirometry tutorials to support you in your learning. If you are new to spirometry and completing all aspects of spirometry, then we would suggest that you start with the performing tutorial. The tutorials are as follows:

- **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.

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- **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 I 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> **These were updated by the ARTP in February 2023 so please do access them.**

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 July on-line Tutorial

Q. Where will I find help with creating a protocol for performing spirometry on an infectious patient as currently, we do not have one thanks.

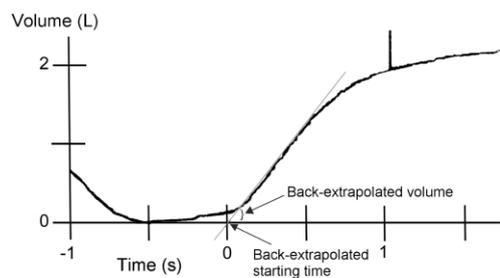
Your local Infection Prevention and Control Team should be able to advise. You could also contact your local Clinical Respiratory Physiologist for advice. The ARTP

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SOP can be a template to start your general spirometry protocols. This would need to be locally adapted if using for your ARTP certification as part of your portfolio requirements

https://www.artp.org.uk/resources/spirometry_sop_2023

Q. Please could you explain at some point how to work out the back-extrapolation and how that applies to reporting on spirometry please.



Back-extrapolation method of determining a reasonable starting point when initial expiratory effort is suboptimal, but the remainder of the forced vital capacity manoeuvre is adequate. Source Hayes D (2009) The Physiologic Basis of Spirometry. Respiratory Care.

Determining the starting point of the FVC is straightforward when the exhalation is optimal, when a volume time curve is available, and tidal volume breathing leading up to the FVC manoeuvre is displayed.

In other situations, for purposes of timing, the back-extrapolation method is used to determine the start of the test.

The back-extrapolation traces back from the steepest slope on the volume-time curve. Hayes D (2009) The Physiologic Basis of Spirometry. Respiratory Care

A test will be suboptimal if there is a back-extrapolated volume of greater than 5% of the FVC or 0.1 L if the FVC is less than 2.0 L. (ARTP 2020)

Q. If I have done spirometry on a person with suspected COPD, pre and post to rule out asthma and the post BD is normal? i.e., above the LLN. Would this then discredit the COPD diagnosis?

The presence of non-fully reversible airflow limitation i.e. ratio <70% post bronchodilator is required to confirm COPD in the context of the structure clinical history.

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Some people can have symptoms and/or structural lung lesions e.g. emphysema without airflow obstruction i.e. ratio $\geq 70\%$ post bronchodilator. In the context of the clinical history, which is always important, these people are labelled “pre-COPD”. The term PRISM (Preserved Ratio Impaired Spirometry) has been proposed to identify those with **normal ratio but abnormal spirometry** (GOLD 2023).

Q. Is there a spirometry pattern typical of ACOS?

GOLD (2023) no longer refers to Asthma COPD Overlap Syndrome (ACOS), emphasising that asthma and COPD are different disorders, although they may share some common treatable traits and clinical features. Asthma and COPD may coexist, if a concurrent diagnosis of asthma is suspected, pharmacological therapy should primarily follow asthma guidelines. Pharmacological and non-pharmacological approaches may also be needed for their COPD (GOLD 2023).

Q. Is there a calibration/verification template to use in clinical practice?

There are several resources on the ARTP website. This link should provide a guide to what is available.

<https://www.artp.org.uk/spirometry-candidate-resources>