

## **CLINICAL PHYSIOLOGY**

RESPIRATORY Physiology has a long association with the British Thoracic Society (BTS) and The European Respiratory Society (ERS). The Professional Body, the Association for Respiratory Technology & Physiology (ARTP), has been increasingly involved at national and international levels in clinical respiratory issues to promote educational and quality standards. The Association is a founder member of the Conference of Clinical Scientists Organisation and the Institute of Physiological Sciences. They are also closely involved with Assembly 9 of the European Respiratory Society.

Diagnostic services in Respiratory Physiology are found in primary, secondary and tertiary care centers. Respiratory physiologists work closely within a multi-discipline team such as respiratory consultants, specialist nurses, physiotherapists and well as general practitioners (GP) and practice nurses in primary care to provide diagnostic services to all specialties across the NHS.

Respiratory Physiologists work autonomously over a wide range of diagnostic and therapeutic specialties, from infants to end of life care. The work load varies: some investigations are high volume whilst others are extremely specialised and only relevant to a smaller patient population.

Typical investigations the respiratory physiologist will carry out are:

- Spirometry - the base line investigation.
- Full Lung Function test - to assess the volume of the lungs and how well the lungs are able to transfer oxygen to the blood.
- Arterial blood gas tests – an invasive procedure to measure the oxygen and carbon dioxide levels in the blood to assess for respiratory failure.
- Oxygen assessments to look at the need for long term oxygen therapy at home. Many physiologists prescribe oxygen for patient's home use.
- Exercise Tolerance Testing – to objectively quantify a patient's exercise capacity and to demonstrate the patient's ability and measure the uptake of oxygen when the lungs are put under stress.

- Muscle Function tests – to assess the function and strength of the respiratory muscles e.g. the diaphragm, and very useful in tracking the disease progression in muscle weakness diseases such as Motor Neurone Disease.
- Many respiratory physiologists have evolved their role to include sleep physiology. Performing sleep tests to diagnose conditions like obstructive sleep apnoea.

All this work entails all aspects of clinical care including triaging referrals; diagnostic analysis and clinical reporting that significantly contributes to patient management, treatment and prognosis. Respiratory Physiologists are engaged in all aspects of equipment management: benchmarking equipment performance requirements and calibration: procurement, commissioning and development in conjunction with manufacturers.

Teaching and Training is a large part of the Respiratory Physiologists' responsibilities and actively encouraged by the professional body. Besides teaching those on the Healthcare Scientist degree programme, they support a range of multidisciplinary professionals engaged in all aspects of respiratory physiology. They have a role to play in the training of a wide range of health care professionals from specialist registrars to primary care nurses.

Respiratory Physiologists are engaged in research and development: proposing and contributing to clinical trials and preparing ethics applications. Respiratory Physiologists submit conference abstracts for oral or poster presentation and also submit to journals. The professional body works in conjunction with the British Thoracic Society to produce national guidelines and standards for good practice in the performance of respiratory measurement. It also works closely with the Department of Health in formulating policy and in the strategic direction of the profession.