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Editorial

Clinical Physiology: An Overview

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EDITORIAL

Clinical physiology is an academic subject in the medical sciences as well as a clinical medical speciality for physicians in the Swedish, Danish, and Finnish health-care systems. Clinical physiology is a discipline of physiology that takes a functional approach to understanding a disease's pathogenesis. Clinical physiology is a diagnostic speciality for medical professionals, in which patients are referred for specific tests of heart, blood vessels, lungs, kidneys, gastrointestinal system, and other organ functions. Electrical activity and air flow are two examples of testing methods. In addition, Clinical Physiologists use imaging techniques such as ultrasound, echocardiography, magnetic resonance imaging (MRI), x-ray computed tomography (CT), and nuclear medicine scanners (e.g. single photon emission computed tomography (SPECT) and positron emission tomography (PET) with and without CT or MRI) to measure movements, velocities, and metabolic processes.

Clinical physiology departments in university hospitals serve as a link between basic physiology and a variety of clinical specialties. Professor Torgny Sjöstrand's work at the Karolinska Hospital in Stockholm helped to establish independent clinical physiology departments, which have served as models for research, teaching, and hospital structure in several other countries. Professor Torgny Sjöstrand founded this branch of physiology in Germany, and it continues to spread around the world in hospitals and academic settings. Sjöstrand founded the new branch as a result of his work at Stockholm's Karolinska Hospital.

Along with Sjöstrand, P.K. Anokhin was a key figure in clinical physiology. Anohkin made a significant contribution to the field of physiology by working tirelessly to solve medical problems among his patients using his theories of functional systems. Clinical physiology was once considered a separate discipline; however from 2008 to 2015, it was classified as a sub-discipline of radiography. As a result, anyone interested in a career in clinical physiology must first become registered and certified radiologists before pursuing a career as a clinical physiologist. Since 2015, it has been allowed to train as a clinical physiologist again, with clinical physiology functioning as a separate discipline from radiology.

The study of bodily functions is known as human physiology. Clinical physiology assessments are often focused on assessing such functions rather than structures and morphology. The creation of new physiological tests for medical diagnostics falls under this specialization. In many hospitals, using devices to measure, monitor, and record patients has shown to be extremely beneficial to patients. It is also beneficial to doctors, as it allows for accurate diagnosis of patients. Nuclear medicine, clinical neurophysiology, and radiology are all tests that are performed in some Clinical Physiology departments. Clinical physiology tests are frequently conducted by several organ-specific specialties in internal medicine, such as cardiology, pulmonology, nephrology, and others, in nations where this specialization is lacking. Clinical physiology is not a medical specialty in Australia, the United Kingdom, or many other Commonwealth and European countries. It is a distinct non-medical health profession - scientist, for example. These specialists also help with disease diagnosis and patient management, with a focus on physiological and pathophysiological mechanisms. Audiologists, cardiac physiologists, gastro-intestinal physiologists, neurophysiologists, respiratory physiologists, and sleep physiologists are all part of the clinical physiology field.

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