

Physical Medicine and Rehabilitation

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Physical medicine and rehabilitation (PM&R) or physiatry (pronounced /fɪˈzjəˌtri/), or rehabilitation medicine, is a branch of medicine that aims to enhance and restore functional ability and quality of life to those with physical impairments or disabilities. A physician having completed training in this field is referred to as a physiatrist or rehab medicine specialist. In order to be a physiatrist in the United States, one must complete four years of medical school, one year of internship, and three years of residency. Physiatrists specialize in restoring optimal function to people with injuries to the muscles, bones, tissues, and nervous system (such as stroke patients).

History

The term 'physiatry' was coined by Dr. Frank H. Krusen in 1938. The term was accepted by the American Medical Association in 1946. The field grew notably in response to the demand for sophisticated rehabilitation techniques for the large number of injured soldiers returning from World War II.

Scope of the field

Physical medicine and rehabilitation involves the management of disorders that alter the function and performance of the patient. Emphasis is placed on the optimization of function through the combined use of medications, physical modalities, physical training with therapeutic exercise, movement & activities modification, adaptive equipment and assistive device, orthotics (braces), prosthesis, and experiential training approaches.

Physical Medicine & Rehabilitation physicians may also perform electrodiagnostics, which are used to provide nervous system functional information for diagnosis and prognosis for various neuromuscular disorders. The common electrodiagnostic tests performed by physiatrists are nerve conduction studies (NCS) and needle electromyographies (EMG). The nerve conduction study involves electrical stimulation to peripheral nerves, and the nerves' responses are measured including such things as onset latency, amplitude, and conduction velocity. Needle electromyography requires needle electrode insertion into the muscles to detect the electrical potential generated from muscle fibers. Abnormal electrical potentials, such as fibrillation potential or positive sharp waves, detected by EMG needles indicate the presence of muscle fibers that have abnormal nerve supplies.

Common conditions that are treated by physiatrists include amputation, spinal cord injury, sports injury, stroke, musculoskeletal pain syndromes such as low back pain, fibromyalgia, and traumatic brain injury. Cardiopulmonary rehabilitation involves optimizing function in those afflicted with heart or lung disease. Chronic pain management is achieved through a multidisciplinary approach involving psychologists, physical therapists, occupational therapists, chiropractors, and interventional procedures when indicated. In addition to the previous methodology, stroke is often

treated with the help of a speech therapist and recreational therapist when possible.

Philosophy

The major concern that PM&R deals with as a medical field is the ability of a person to function optimally within the limitations placed upon them by a disease process for which there is no known cure. The emphasis is not on the full restoration to the premorbid level of function, but rather the optimization of the quality of life for those not able to achieve full restoration. A team approach to chronic conditions is emphasized to coordinate care of patients. Comprehensive Rehabilitation is provided by specialists in this field, who act as a facilitator, team leader, and medical expert for rehabilitation.

Subspecialty

Six formal sub-specializations are recognized by the field in the United States:

Hospice and Palliative Medicine

Neuromuscular Medicine

Pain Medicine

Pediatric Rehabilitation

Spinal Cord Injury Medicine

Sports Medicine

Other subspecialties within the field that are recognized include the following:

Musculoskeletal pain management

Intervention physiatry

Surgical rehabilitation

Rheumatological rehabilitation

Obesity and other lifestyle disease modifications

Cardiopulmonary rehabilitation

Amputee care

Electrodiagnostics

Traumatic brain injury (TBI)