

The Role of Occupational Therapy For Rehabilitation of the Upper Extremity



A major focus of occupational therapy is rehabilitation related to impairments of the upper extremity (i.e., shoulder, elbow, forearm, wrist, hand). This fact sheet provides an overview of occupational therapy practice in treating upper extremity conditions as well as supporting references relating to occupational therapy practitioners' education, clinical training, scope of practice, and licensure requirements.

Educational Standards, Skills and Knowledge Standards for occupational therapy and occupational therapy assistant educational programs contain specific requirements that form the foundation for knowledge and skills in the area of the upper extremity. Occupational therapy practitioners can be credentialed at the professional level as an occupational therapist, or at the technical level as an occupational therapy assistant.

Occupational therapy educational programs are accredited by the Accreditation

Council for Occupational Therapy Education (ACOTE®), and the Standards for both the professional and technical levels require course content to include biology, anatomy, physiology, neuroscience, and kinesiology or biomechanics. In addition, occupational therapists must "exhibit the ability to analyze tasks relative to areas of occupation, performance skills, performance patterns, activity demands, context(s), and client factors to formulate an intervention plan" (Standard B.2.7; ACOTE, 2007 a; ACOTE, 2007 b). That is, occupational therapy practitioners use a client-centered evaluation that identifies deficits in the ability to perform self-care, home management, and outside activities, including work, that result from an upper extremity injury or condition. Occupational therapy practitioners who treat persons with upper extremity injuries or disabilities work closely with the surgeon or treating physician to ensure the most favorable therapeutic outcome.

Occupational therapy interventions are designed to meet individual client needs and may include the following as part of a comprehensive plan of care:

- ✦ Therapeutic activities
- ✦ Therapeutic exercise
- ✦ Orthotic design, selection, fitting, fabrication, and training
- ✦ Joint protection or energy conservation instruction
- ✦ Desensitization
- ✦ Ergonomic and activity modification in home, work, school or leisure
- ✦ Sensory re-education
- ✦ Scar management
- ✦ Pain management
- ✦ Work conditioning or work hardening
- ✦ Training in ADLs or IADLs and adaptive or assistive devices
- ✦ Education for postsurgical or post injury safety, including sensory loss

From a practical perspective, occupational therapy practitioners working in the

(continued on the next page)

area of upper extremity rehabilitation achieve competency in adjunct areas of treatment, which may include:

- ✦ Wound care
- ✦ Application of physical agent modalities
- ✦ Design and fabrication of selected orthotics for postsurgical, post-injury, or long-term use
- ✦ Ergonomic principles
- ✦ Diagnostic and post-surgical protocols
- ✦ Manual therapy
- ✦ Biofeedback techniques
- ✦ Taping techniques
- ✦ Compression therapy (Hand Therapy Certification Commission [HTTC] 2008)



Unique to occupational therapy, a strong educational component in psychosocial development and pathology provides the basis for understanding the impact of upper-extremity dysfunction on key daily activities and roles. Course work in mental health gives

practitioners the skills to assess clients' psychosocial and emotional needs, modify the treatment approach to facilitate compliance with the rehabilitation program, and promote the best outcome possible.

Occupational Therapy Approach

The occupational therapist's approach to rehabilitation is a holistic one that goes beyond an isolated upper-extremity injury to include the entire person and each individual's functional needs and roles. The ultimate goal is the client's return to participation in his or her daily activities. In keeping with a client-centered, comprehensive approach, occupational therapy evaluations include not only musculoskeletal (e.g., muscle strength, range of motion); sensory; cognitive or perceptual (if indicated); and vascular, skin, or connective tissue assessment, but also relevant past medical and vocational or avocational history. As part of the evaluation process, occupational therapists identify psychosocial, environmental, and other factors that may influence rehabilitation outcomes. In addition, they assess demands of the workplace and home, including caregiving roles and leisure activities, in order to ensure that interventions are designed to meet tangible, realistic outcomes

like returning to work or independent living at home.

The following are examples of conditions and injuries of the upper extremity (i.e., hand, wrist, elbow, shoulder girdle, rotator cuff, multiple joints) treated by occupational therapy practitioners.

- ✦ Fractures
- ✦ Amputations
- ✦ Arthritis and rheumatic diseases
- ✦ Congenital anomalies
- ✦ Crush injuries or trauma
- ✦ Cumulative trauma
- ✦ Dislocations and subluxations
- ✦ Ligamentous injury and instability
- ✦ Muscle strains, tears, and avulsions
- ✦ Tendon injuries and conditions (e.g., lacerations, tendon transfers, tendonitis, ruptures)
- ✦ Nerve injuries and conditions (e.g., neuropathies, palsies, nerve repair)
- ✦ Pain (e.g., complex regional pain syndrome, fibromyalgia)
- ✦ Replantation and revascularization
- ✦ Wounds and scars
- ✦ Thermal and electrical injuries
- ✦ Neuromuscular diseases or spinal cord and central nervous system injuries (HTTC, 2008)

References and Resources

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