

→ OCCUPATIONAL THERAPIST

OUR ROLE WITH AMPUTATIONS



“Occupational Therapy is where science, creativity and compassion collide.”

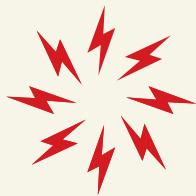
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1 Occupational Therapy role in prosthetic rehabilitation

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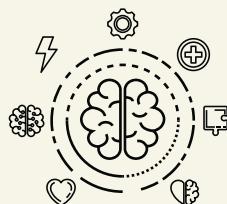
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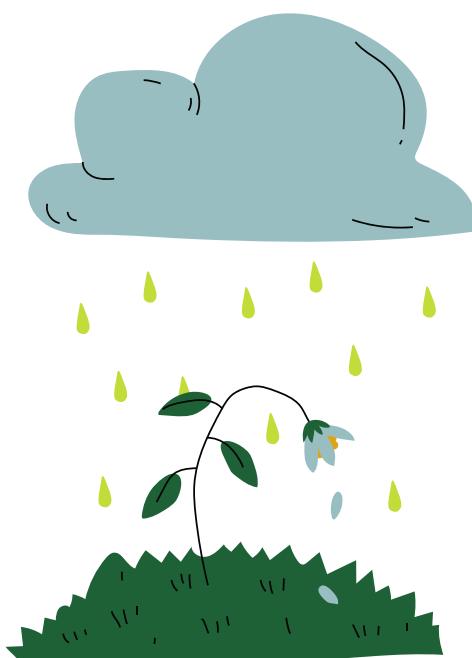
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OCCUPATIONAL THERAPY ROLE WITH AMPUTATIONS



By addressing the physical, emotional and social aspects of rehabilitation, occupational therapists play a vital role in helping individuals with amputations lead fulfilling, independent lives.

Occupational therapists (OTs) play an essential role in the rehabilitation of individuals with amputations, focusing on helping them regain and maximise independence, enhance functionality in daily activities, and improve their overall quality of life. Every amputee's journey is unique, varying greatly from person to person. OTs bring their specialised expertise to adapt and tailor their approach to meet the specific needs and goals of each individual, ensuring personalised and effective rehabilitation.

OTs collaborate with:

- Prosthetists: For adjustments and optimal prosthetic fitting.
- Physiotherapists: For gait training and overall mobility.
- Exercise Rehabilitation Instructors: For strength and conditioning.
- Consultants: For medical management.
- Psychologists: To address broader psychosocial needs.
- Case Managers: For continuity of care and logistics.

MANAGING PAIN AND SENSATIONS

USING GRADED MOTOR IMAGERY

RESIDUAL PAIN

This is the pain that originates from the remaining part of the limb following an amputation. Residual pain is a complex and multifactorial condition that requires a multidisciplinary approach for effective management. Residual pain can have various causes including; scar tissue, swelling, neuroma formation, abnormal bone growth and abnormal sensation.

PHANTOM LIMB SENSATION

This refers to the feeling that the limb or body part is still present following an amputation. These sensations can vary from itching to cramping and can be constant or intermittent. It is very common to experience phantom limb sensation (PLS) after an amputation and is a normal part of the bodies adjustment.

PHANTOM LIMB PAIN

Pain or discomfort which is perceived in the limb or body part which has been amputated. It can range from mild discomfort to severe pain and can be intermittent or constant.

GRADED MOTOR IMAGERY



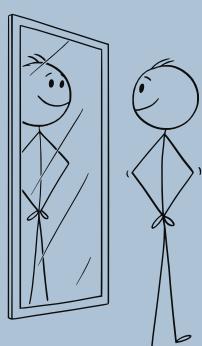
Graded Motor Imagery (GMI) is a therapeutic approach designed to treat pain and movement impairments.

GMI works by retraining the brain's perception and processing of pain and movement through a series of structured, progressive steps. The brain is adaptable and mouldable throughout our entire lives, so this method uses the brains ability to reorganise and adapt, to reduce pain and restore function.

GMI involves 3 sequential stages;

1. Left/right discrimination (laterality)
2. Explicit Motor Imagery
3. Mirror Therapy

The OT will guide individuals through each stage, monitoring their pain and tolerance levels while tailoring the approach ensuring the individual is comfortable and confident with each stage before moving onto the next.



SCARS, SENSITIVITY AND SWELLING

SCAR MASSAGE

A technique used to improve the appearance, flexibility, and function of scar tissue. Scar massage works by applying gentle but firm pressure to the scar and surrounding tissues, promoting healing and addressing the physical and aesthetic concerns associated with scars. This will be introduced by the OT with the aim to be incorporated into a daily routine to be completed by the individual.

SILICONE

Silicone is an effective treatment for improving the appearance, interference and quality of scars. It can be applied in the form of sheets, gels, or creams with the OT providing guidance for the most suitable option. Silicone creates a barrier to help retain moisture, reducing scar thickness, improving elasticity, and minimising discolouration.

DESENSITISATION

A technique used to reduce hypersensitivity in and around scar tissue using non-harmful stimuli, with the aim to "retrain" the nervous system to respond more normally to sensory input, improving comfort and functionality. This is a graded approach that will be introduced and guided by the OT as appropriate, using a range of textures, temperatures and pressures.

VIBRATION

A technique used to improve scar healing, reduce sensitivity, and alleviate discomfort associated with scar tissue. The gentle application of vibration to the skin and scar area provides sensory input that can help reduce hypersensitivity, improve tissue mobility, and stimulate healing. This can be explored on an individual basis by the OT alongside the other management techniques.

SWELLING

Oedema is a common challenge that can impact healing, prosthetic fitting, and overall mobility and it is important that it is monitored closely and managed appropriately. The OT will explore various evidence-based techniques and tools to reduce swelling and promote circulation and choose the most appropriate combination. These techniques may include; positioning, compression, massage and education.

PSYCHOLOGICAL AND PHYSICAL FACTORS



SLEEP

Sleep plays a crucial role in the proper functioning of the body and mind. During sleep, the body undergoes essential processes for physical restoration, emotional regulation, hormonal balance, cognitive function, and immune defense. The OT can assess the individual's sleep routine and hygiene, and provide education and support with enhancing it to allow for optimum engagement in their rehabilitation.

ANXIETY

Anxiety is the body's natural response to stress or perceived danger. Unmanaged anxiety can significantly impact your mental, emotional, and physical well-being, as well as your ability to function effectively in daily life, including the rehabilitation process. The OT can provide education on anxiety to increase the individual's understanding, while exploring influencing factors and management techniques.

RELAXATION

Relaxation is important as it helps restore balance to the body and mind, reducing the harmful effects of stress and promoting overall well-being. The OT will explore relaxation techniques with the aim of providing the body with the opportunity to rest, recover, and maintain optimal functioning while engaging in rehab. Relaxation techniques provide an opportunity to regulate emotions, relieve muscle tension and improve productivity.

NUTRITION

Proper nutrition supports the body's healing and immunity, supports energy needs, and improve overall physical and mental well-being. It also plays a key role in maintaining a healthy weight, which is essential for mobility and prosthetic use. The OT can explore the individual's nutritional balance focusing on protein intake as this is essential for tissue repair and building muscle.

GOAL SETTING AND OUTCOME MEASURES

GOALS

Occupational therapists (OTs) set goals to ensure therapy is meaningful, client-centered, and focused on achieving practical outcomes. Goals reflect the unique needs and priorities of each individual and aim to promote motivation by making therapy purposeful and relevant, helping individuals stay engaged and committed to their progress. Goals provide direction and structure to therapy, ensuring the whole multi-disciplinary team have focus for their interventions.

Setting clear, measurable goals also allows therapists to track progress and demonstrate the effectiveness of interventions which provides clients with a sense of achievement and helps identify areas where adjustments are needed. By focusing on functional, meaningful outcomes, OTs use goal-setting to guide clients toward greater independence and an improved quality of life.

OUTCOME MEASURES (OM'S)

These tools are essential in rehabilitation, providing objective data to track progress, refine treatment plans, and ensure evidence-based care. Outcome measures empower individuals undergoing rehabilitation by offering a tangible way to track their progress over time.



These measures transform subjective experiences into clear, quantifiable evidence, instilling a sense of accomplishment and motivation. By setting clear benchmarks and goals, OM's hold both therapists and individuals accountable for making consistent progress.

The use of OM's enhances communication across all those involved in an individual's care. Whether it's providing updates to families, coordinating with other healthcare professionals, or ensuring compliance with insurance and regulatory requirements. This clarity not only supports shared decision-making but also advocates for the individual's needs by providing evidence to justify the continuation, modification, or completion of specific therapeutic interventions.

ACTIVITIES OF DAILY LIVING (ADL'S)



REMEDY

An ADL refers to the essential tasks and routines that people perform every day to take care of themselves, ranging from basic to more complex:

- Basic: washing, dressing, eating
- Instrumental: shopping, domestic tasks, managing finances

ADLs are fundamental to an individual's quality of life, and challenges in performing them can significantly impact physical and emotional well-being.

OTs play a key role in supporting individuals to overcome barriers to ADLs, focusing on problem-solving and adaptive strategies to promote independence. This often involves assessing the individual's current abilities and tailoring interventions to their unique needs. For instance, an OT might teach alternative techniques to simplify tasks, such as one-handed dressing methods, or suggest pacing strategies to conserve energy.

Incorporating adaptive equipment is another essential element of OT practice. Tools such as dressing aids, shower chairs, grab bars, or kitchen gadgets can be introduced to help individuals perform tasks more easily and safely. OTs also evaluate whether more specialised equipment might further enhance mobility and independence. By matching the right equipment to the individual's capabilities and environment, OTs help ensure that solutions are practical and effective.

Home environment visits are crucial in this process, as they allow OTs to assess how an individual interacts with their living space. These visits provide valuable insights into barriers that may hinder ADLs, such as narrow doorways, uneven flooring, or inaccessible storage areas. Based on these assessments, OTs can recommend home modifications, from basic to more complex, to create a safer and more supportive environment.

When it comes to mobility, specifically with lower limb amputees, OTs also assist with wheelchair assessments and recommendations. They evaluate the individual's physical and functional abilities, as well as influencing factors such as fatigue, pain, upcoming surgeries etc. to ensure the selected wheelchair meets their needs. A well-fitted wheelchair can significantly enhance an individual's ability to perform ADLs and navigate their environment on days where using a prosthesis isn't possible.



PROSTHESIS AND FUNCTIONAL TRAINING



PROSTHESIS PRESCRIPTION

The OT will be involved in prosthetic prescription, especially with upper limb amputees. They will consider factors such as; scar tissue, available movement, strength, sensation, other impacting injuries, cognition, motivation, functional desires, home life and vocation.

It is important that other injuries or areas of weakness are taken into account to ensure that the individual will manage all aspects of having a prosthetic limb.

The OT will support with; caring for the residual limb, caring for the prosthesis, donning/doffing, operating controls, introducing to family etc.

PROSTHETIC TRAINING

Functional Prosthetic Training aims to help individuals effectively incorporate their prosthetic limb(s) into daily activities, promoting independence and quality of life. This can be a challenging stage with an individual's motivation and journey to date having an influencing factor. The OT will focus on skill development, problem solving areas as required to ensure the prosthesis becomes a functional and meaningful part of the individual's routine.

More specifically with upper limb amputees, the functional training will be guided by the OT and take on a structured approach in line with the individual's progression. This will initially involve establishing and progressing the fundamental movements, progressing on to varying heights, weights, textures, planes of movement etc. Functional tasks will be gradually introduced with the aim of refining the fundamental movements to increase efficiency and smoothness of movements. Throughout this process adaptive equipment can be considered.

The aim of this booklet is to provide an overview of the role of Occupational Therapy with upper and lower limb amputees.

It has been written specifically for service users and families however should provide appropriate information for healthcare professionals, case managers and legal teams.

It is not an exhaustive compilation of information so if you have any other questions please do not hesitate to get in touch.

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