

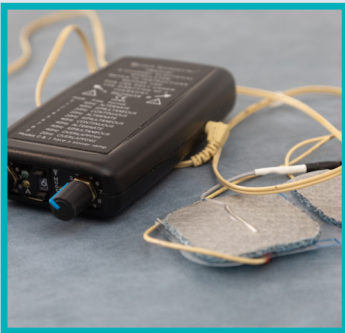


**Olivia Dornie**  
Case Manager & Occupational Therapist

## Regaining meaningful functional independence

I received a referral to provide **Upper Limb Therapy** for a client 'Tom' who had sustained a spinal cord injury, resulting in significant physical difficulties, particularly with his mobility and the use of his hands and arms. In particular, he found it very difficult to grip and release items and to reach for things, which affected his ability to carry out meaningful every day tasks. His wife provided full time care and support, including assisting with personal care and preparing meals and Tom would do what he could to feed and drink for himself, such as using a water bottle with a straw which he found undignified.

Tom wanted to improve his upper limb function, but specifically he wanted to be able to wash his hair, to be more independent with feeding and drinking, and to improve sensation in his hands. He wanted to do more of the basics for himself, allowing his wife to play less of a carer role.



Over a series of approximately 30 sessions, we we worked on improving upper limb functioning, including using functional electrical stimulation - a device like a TENS machine that encourages the fingers to open.

In neuro-rehab, repetition is key to re-wiring the brain, but evidence suggests less repetition is needed if the exercise is task-orientated so we always applied the rehabilitation to functional tasks, such as using a mug, or reaching for items in cupboards, using the FES machine to aid purposeful movement.

We also carried out sessions on sensory re-training, familiarising Tom with different textures, pressures and temperatures. We did activities using interesting textures such as Velcro or sponge.

Upper limb therapy progressed onto fine motor rehabilitation, using a fine motor board I developed specifically with Tom's rehab in mind. He had to complete a thread maze, clip pegs, use an allen key and spanner, open padlocks etc. Again, this rehabilitation approach was always then applied to practical tasks directly relating to his functional goals.

I also prescribed a shower aid which, in combination with his improved grip, enabled Tom to shower independently and we continued to work on upper limb strength in the hopes that we would be able to shower without the aid in the future.

It was really important that Tom continued his rehab between sessions, particularly with repetitions of movement and using his hands in function. His wife supported him to use the FES machine on a daily basis and I would set weekly exercises.

By the end of our sessions, Tom's upper limb functioning had significantly improved. With the use of an aid, he could wash his own hair independently, without needing his wife's assistance. He started to use a glass on a daily basis which was hugely significant for him. He didn't need to use a water bottle with a straw when out in the community, and the use of a glass gave him a sense of normality. He was able to prepare a meal with some assistance, and we even surprised his wife with apple crumble as well as some other culinary delights which gave him a real sense of achievement.

Tom started to spend more time outdoors and even bought some rather cute farm animals to keep him entertained! Although he would never regain full use of his upper limbs, he showed a marked improvement and increased independence as a result of Occupational Therapy input. He became less reliant on his wife and his quality of life improved with being able to complete jobs outside with the animals, giving him a sense of purpose and independence.