

Musculocutaneous nerve injury

[Nerve transfer](#) has become a common and often effective [reconstructive](#) strategy for proximal and complex [peripheral nerve injury](#) of the upper limb. A case-based discussion explores the principles and potential benefits of nerve transfer surgery and offers in-depth discussion of several established and valuable techniques including: motor transfer for elbow flexion after [musculocutaneous nerve injury](#), deltoid reanimation for [axillary nerve](#) palsy, intrinsic re-innervation following proximal [ulnar nerve](#) repair, and critical sensory recovery despite non-reconstructable median [nerve lesions](#). ¹⁾

Case reports

A 25-year-old man sustained a right-sided [brachial plexus injury](#) from a high-velocity motocross accident. Physical examination and electromyography were consistent with a pan-brachial plexopathy with no evidence of axonal continuity. The patient underwent a spinal accessory to suprascapular nerve transfer and an intercostal to musculocutaneous nerve transfer with interpositional sural nerve grafts. He recovered MRC 4/5 elbow flexion and MRC 2/5 shoulder abduction and external rotation. Twenty-two months post-injury the patient displayed a flicker of flexion of his flexor pollicis longus and flexor digitorum profundus to his index finger - he went on to recover a functional pinch. Thirty-six months post-injury the patient displayed a flicker of contraction in brachioradialis with motor unit potentials on electromyography. This case demonstrates that some patients may have capacity for functional recovery after prolonged denervation and highlights the potential impact of anatomical anomalies in the assessment and treatment of peripheral nerve injuries. ²⁾

Unclassified

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