



THE SENSITIVE HAND

Following a hand injury or surgery it is common for patients to experience heightened sensitivity of the area. It is thought to be the result of over-active nerve-endings or micro neuromas (Rosen, 2012). This hypersensitivity or hyperaesthesia includes Allodynia: when pain results from stimuli which would not normally provoke pain and Hyperalgesia: an increase in sensitivity to tactile stimuli.

Desensitisation programmes can be helpful in reducing this hypersensitivity by encouraging the sensory system to adapt and to re-learn a normal response to sensory input, decreasing the discomfort associated with touch in the hypersensitive area. A study in 2011 demonstrated statistically significant improvements in pain levels/discomfort at rest and with use or touch, a decreased size of the sensitive area and an improved ability to perform ADL's and occupational activities (such as using a computer and tools) following a 6 week desensitisation programme (Goransson & Cederlund, 2011).

Treatment consists of graded exposure to textures and pressures. We begin with those that are just tolerable to the patient and progress the exposure as their sensitivity changes – constantly challenging the sensory system to adapt. For example:

- Patients touch and lightly stroke the sensitive area with readily available soft textured items and then use progressively "scratchy" items.
- Hands can be immersed in containers of dry rice/sand/macaroni etc.
- Mini-massagers stroked over the area, providing a vibrating sensation.
- Tapping fingers on increasingly firm surfaces or tapping the sensitive area with different items.
- Finger tips can trace the outline of shapes.

If patients are struggling to work or manage their ADL's because of the sensitivity of their finger or hand we might need to provide an occlusive bandage to protect the area to allow them to "get on with life" in the short-term while the exercises above continue to address the sensitivity.

Our Hand Therapists will be able to advise patients on what exercises are appropriate and monitor progress, ensuring Central Sensitisation does not occur.

References:

Goransson, I and Cederlund, R (2011) A study of the effect of desensitization on hyperaesthesia in the hand and upper extremity after injury or surgery. *Hand Therapy* 16(1): 12-18.

Rosen, B (2012) Rehabilitation following peripheral nerve injury, in: *Sense and Sensibility*, proceedings of the NZAHT Conference, Dunedin, pp. 1-8.

