

## NERVE REPAIR

You have just undergone repair of a nerve. The ends have been stitched together under a microscope. Nerves are similar to electrical cable and contain many fibres (axons). Some of these fibres are **sensory**, providing feeling in a defined area, and some are **motor**, activating muscles and sweat glands.

When a nerve is repaired, the fibres sprout out of the nerve ending and grow across the gap towards the fingers (A,B). Feeling will not return immediately after the operation. You must be careful to **prevent injury** to the numb areas from heat and sharp objects (e.g. cigarettes, cooking utensils).

You will sometimes be provided with a **splint** if the repair is thought to be vulnerable to stretching. The splint will be applied for two weeks (longer if other structures have been repaired). This allows some movement but prevents the repair being strained. Movement is important to prevent the nerve repair becoming adherent to surrounding tendons or skin

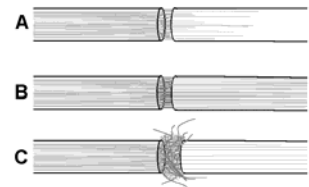
Any stitches will be removed about two weeks after the operation. Following this, the scar will be somewhat firm to touch and tender. Massaging the area firmly with the moisturizing cream can help these symptoms. Possible complications include: -

**Wound** Problems include swelling, bruising, bleeding, blood collection under the wound (haematoma) and splitting of the wound (dehiscence). Wound infections can occur in 5% of cases of repair, particularly if the injury occurred on a contaminated surface such as in an agricultural setting.

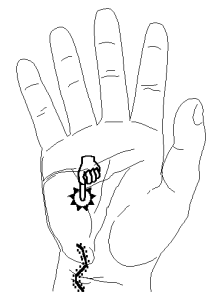
**Joint stiffness** Joints in the region can become stiff even if not directly injured as a result of factors such as swelling, infection and immobility.

**Regional pain syndrome** About 5% (1 in 20) of people are sensitive to injury and/or hand surgery and their hand may become swollen, painful and stiff. This problem cannot be predicted, is variable in severity and is principally treated with physiotherapy.

**Recovery** Nerves never recover fully after being cut. Recovery depends on many factors including the age of patient, mechanism of injury, time elapsed from injury, level of injury, type of nerve, specific nerve injured, associated injuries, and tension across the repair. The best you can hope for is an 80% recovery. Inevitably, some fibres fail to find their way across the gap and get stuck in the scar tissue. They can collect and form a lump at the repair site (**neuroma**) (C). This lump is tender and when touched, an unpleasant electric sensation is felt in the area supplied by the nerve. Nerve recovery is much poorer when this occurs.



Nerve fibres grow at 1mm each day (with a day off on Sunday!). The younger you are, the quicker they grow. The sensory fibres have different functions such as temperature, pain, vibration, touch, etc. The less sophisticated fibres recover quickest. Therefore as feeling returns, it is often felt as “pins&needles” or even as “unpleasant”. As the months pass, feeling becomes more normal although the affected area usually ends up feeling “different”. Your surgeon will monitor the early progress of the recovery by tapping the skin beyond the repair. An electric sensation marks where the nerves have grown to.



If the electric sensation fails to move and becomes localised at the repair-site, it may indicate that the repair has been unsuccessful and that you are forming a neuroma. This is usually associated with a poor level of functional recovery (i.e. the fingers remain fairly numb). If this combination occurs, then revision of the repair will be considered. This usually involves a nerve-graft or nerve burial operation.