

## Wounds in the hand

Wounds in the hand range from simple grazes and lacerations of the skin to complex crush or cutting injuries, that involve nerves, muscles, tendons, and bones. Injuries to some of these structures are discussed in their own information sheets. Lacerations (cuts) of the skin of the hand are very common. Most are superficial meaning the deepest layers of skin are unbroken, and heal in a few days without medical intervention. Deeper wounds are those in which the full thickness of the skin is lacerated to expose the underlying tissues. Sometimes a patch of skin is cut or torn away from the hand skin is lost creating a defect. Deep wounds and those with skin loss are likely to need surgery.

## How are wounds in the hand treated?

All wounds should be washed in tap water as soon as possible to remove contaminants and reduce the risk of infection. Simple grazes and shallow lacerations do not necessarily need any further treatment. However, dressings can help to relieve pain and absorb blood and fluid. Deeper wounds involving the full thickness of the skin usually benefit from stitches. Closing the wound means it will heal quicker and is less likely to get infected. The scar is also likely to be better. When a patch of skin is missing, unless it is small, it may require a skin graft. This an expendable piece of skin taken from elsewhere in the body that is used to cover the defect. Sometimes a skin 'flap' is used instead of a skin graft. This is when a patch of the surrounding skin is moved into the defect. Very occasionally if a lot of skin has been lost or the wound is very deep, a flap may need to be transplanted from another part of the body (this is called a 'free flap'). Most wounds in the hand can be repaired under local anaesthetic (the patient remains awake and injections are used to make the hand numb). More extensive operations often require a general anaesthetic (when the patient goes to sleep).

## What is the outcome?

The outcome from wounds in hand is generally good. Wounds in the hand heal quickly because it has a good blood supply. Superficial wounds like grazes and shallow cuts heal very quickly and may not leave any scarring. Deeper wounds form permanent scars. Scars tend to thicken in the first three months after injury before softening over the subsequent 18 months. Skin grafts need to be looked after carefully in the first couple of weeks because excessive rubbing or movement may prevent them healing. Once a graft has healed it needs regular moisturising and massage to help soften it. Skin grafts tend do contract and occasionally this can be excessive and require further treatment. Skin flaps do not contract nearly as much but they may not have quite the same degree of sensation as the surrounding skin. Often sensation partially returns over a period of several months. Hands tend to swell after injury or surgery and so elevation in the first few is essential. Generally, patients are encouraged to move their hands fully after injury to prevent stiffness. Depending on the nature of injury, the surgeon may immobilize the hand with a splint or specify avoiding certain movements while the wound heals. It is helpful to take painkillers while the wound is healing to allow relevant exercises and sometimes antibiotics are also prescribed after surgery. Injured hands may be overly sensitive to the cold for the first two winters after injury. Rarely pain in the hand may be worse or continue for longer than expected and require further treatment.