REMOVAL OF METALWORK

Metalwork is inserted in bone to stabilize an accidental break (fracture) or a deliberate break (osteotomy). The metalwork "fixation" can take the form of wires, pins, plates or screws. Once the break has healed, the metalwork serves no purpose and may be removed. Removal is, however, not always straightforward and can be associated with complications. For this reason, most metalwork is left in place, however there are some indications for its removal: -

- Misplacement of metalwork in or near a joint causing loss of movement and pain.
- Prominence causing a tender lump.
- Tendon irritation or rupture.
- Nerve irritation.
- Chronic infection.
- Loosening, movement or breakage of the metalwork.
- Persistent pain around the fixation.
- Metal allergy, particularly to Nickel causing swelling and inflammation.
- Children because of the potential to interfere with growth
- Athletes because of the risk of fracture around screw-holes.

Removal is usually not performed until at least one year after fixation when the bone has recovered its strength. Plate removal surgery is done through the original incision. However, the incision may be made longer and new incisions may be needed to remove wires. The recovery time is generally faster than the original fixation unless removal is combined with other procedures such as freeing or repairing tendons. The risk of surgery is greater than the original surgery because of scar tissue, adhesions and bone overgrowth.

Technical Portions of broken screws and wires may be left in place if they are deeply placed and doing no harm. Very rarely the metalwork cannot be removed because of instrument failure.

Discomfort Aches and cold sensitivity cannot necessarily be blamed on the metalwork and these symptoms may persist after its removal.

Wound Possible problems include swelling, bruising, bleeding, blood collection under the wound (haematoma) and splitting of the wound (dehiscence).

Infection Superficial infections are quite common (5%) causing a redness, swelling and pus collection particularly around the stitches. These usually settle within days if treated promptly with local wound measures and antibiotics. Deep infections in joint, bone or around tendons are fortunately very rare but cause tissue damage and significant long-term complications. Treatment may be prolonged and requires admission for antibiotics and surgery**.**

Scar You will have a scar, which will be firm to touch and tender for some months. This can be helped by firm massage with the moisturizing cream.

Stiffness This can occur or persist if the hand is not used and exercised after the operation.

Damage Any structure in the vicinity of an operation can be cut, burned, scraped or bruised by surgical instruments. Damage to the small nerves running in the region can cause a small area of numbness or more rarely a painful spot in the scar (neuroma). Damage of major nerves, blood vessels or tendon is very rare and would cause numbness and loss of movement, necessitating a further operation for repair.

Fracture The bone is weakened temporarily by removal of the metalwork. Some protection is required until screw-holes have filled in and the bone has strengthened. Heavy use and contact sports should be avoided until twelve weeks after removal.

Regional pain syndrome Any operation or injury can cause the hand to become generally swollen, painful and stiff. This problem occurs in about 5% of cases and cannot be predicted. Milder cases merely slow progress and settle. Severe cases are fortunately very rare but can cause permanent dysfunction in the whole limb.