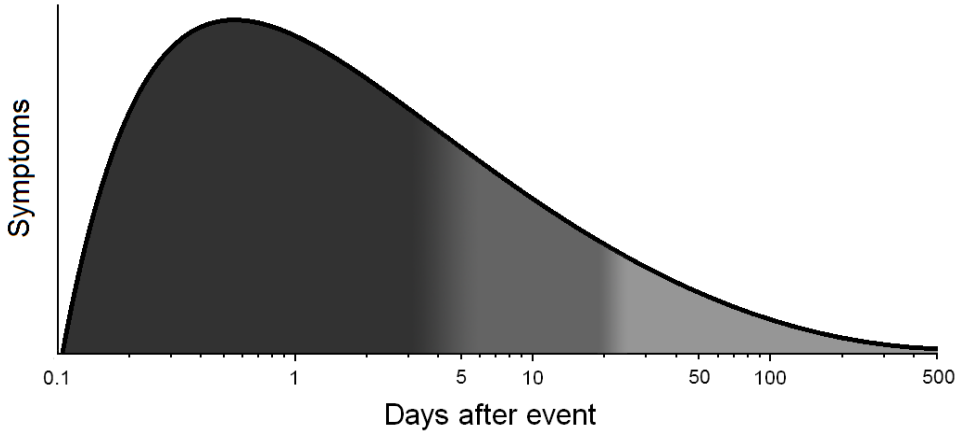
RECOVERY AFTER INJURY OR SURGERY

It is important that you understand the process of healing, which is much slower than is generally appreciated. Healing of any tissue comprises three overlapping phases:

- **Inflammation phase** is characterised by increased blood flow causing swelling, heat, redness, pain and loss of function. It usually lasts only days but may be prolonged by infection.
- **Repair phase** when the tissues are healing. The blood collection (bruise/haematoma) at the site of injury is invaded by blood vessels and cells that will make the new skin, tendon, bone, nerve and the collagen that gives tissue strength.
- **Maturation phase** the final phase of healing, when scar tissue (collagen) is formed and then slowly remodelled. During this time, the strength of the injured tissue/bone increases. Although healing rates vary from tissue-to-tissue and from person-to-person, most tissues have recovered most of their strength by 12 weeks after injury.



The whole repair process is like a busy building site comprising new blood vessels as a supply system, security cells to combat infection, specialist cells that reform the injured or lost tissue, builder cells that make and use collagen to serve as scaffolding and then the final framework holding together the repaired structure. Once repair is complete, scaffolding is taken down, the security and building cells leave the site and the supply system is dismantled.

Injured tissues are therefore swollen, firm (indurated), warm to touch, tender and remain so for many months. Scars and fractures are thickened until their final maturation or consolidation respectively. Healing is a gluing process and tissues tend to stick together causing tightness and loss of movement.

What can you do to help?

- **Inflammation phase** Hand elevation limits bleeding and swelling.
- **Repair phase** Hand elevation and then movement is encouraged to limit swelling of tissues and to prevent stiffness. You will be given protective splints and specific advice after repair of tendon, ligament or fractures to avoid over-straining repairs.
- **Maturation phase** Activity can be increased as guided by pain and common-sense. Movement is important to maintain glide of tendons, elasticity of ligaments and to prevent stiffness. Massage of wounds prevents tethering, flattens the scars and reduces tenderness

Be patient. Eventually swelling and soreness will settle; scars will flatten and fade. Healing is slow and cannot be hurried