## **QRS Information Sheet No: T1**

# How QRS helps with soft tissue injuries



QRS fact sheets are issued to explain the general application of QRS technology. It is envisaged that they will be supported by more detailed advice provided by QRS Consultants

QRS can reduce the time for soft tissue healing by as much as 50%

### The Principle

Research has shown that QRS effectiveness is not through heat production - as is the case with some modern treatments. It is at the cellular level. One significant outcome of this is the effect it has on soft tissue injuries. As early as 1940 it was suggested that magnetic fields might influence membrane permeability. It has since been established that magnetic fields can influence ATP (Adenosine Triphosphate) production, increase the supply of oxygen and nutrients via the vascular system, improve the removal of waste via the lymphatic system and help to re-balance the distribution of ions across the cell membrane. Healthy cells in tissue have a membrane potential difference between the inner and outer membrane. This causes a steady flow of ions through its pores. In a damaged cell the potential is raised and an increased sodium inflow occurs. As a result, interstitial fluid is attracted to the area, resulting in swelling and oedema.

The application of the QRS pulsed electromagnetic field to damaged cells accelerates the re-establishment of normal potentials, thereby increasing the rate of healing and reducing swelling. This can help to disperse bruising also. The QRS magnetic field has the same (but enhanced) effect as an ice pack.

#### QRS has the following effects:

- a. Blood viscosity is reduced and the blood moves faster.
- b. The risk of infection is reduced due to the increased flow of oxygenated blood.
- c. The more porous cell membrane increases the production of ATP and the detoxification of the cells.
- d. The expected reduction in the time for soft tissue healing is of the order of 50%.
- e. The amount of scar tissue is reduced because the injury heals more quickly and with more uniformity.
- f. The patient has a feeling of wellbeing accompanied by significant pain reduction. This has a beneficial effect on recovery time.

#### **QRS** Application

Mat Applicator

Morning Mid-day Late Afternoon

Setting 6 Setting 6 Setting 3

Pillow Applicator

Four (4) hourly to complement Mat applicator Settings – See page 16 of the user's manual