



## How QRS helps with loose endoprotheses

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

**Experience from Europe over the past 15 years is that when hip joint endoprotheses became loose or in danger of becoming loose the doctors did not need to replace them. They were able to stabilise them with QRS**

### The Principle

One of the main focal points of orthopaedics is the preservation of artificial joints, especially endoprotheses. When they loosen or are in danger of loosening, QRS is always able to stabilise the joints with magnetic field therapy. The phenomenon can be explained through studies conducted at the University of Wuppertal. Under the influence of magnetic fields the metabolic exchange between the blood stream and the cells improves. The calcium level increases.

In bone, areas of stress generate small electric charges that are greater than those of less stressed areas, so that polarised bone-laying cells (osteoblasts) are believed to be attracted to these areas and begin to build up extra bone material to counter the stress.

With bone injuries, bleeding occurs to form a haematoma in which capillaries quickly form, transporting enriched blood to the injury site. The pulsed electromagnetic field therapy applied using the QRS contains the exact frequency packages and the optimum intensity to cause vaso and capillary dilation, so helping to speed up the process of callus formation. Within the bone itself, pulsed electro-magnetism causes the induction of small eddy currents in the trace elements, which in turn purify and strengthen the crystal structures. These have the same effect as the stress-induced voltages caused by the alpha quartz and as such, attract bone cells to the area under treatment. This can therefore accelerate the bone healing process to allow earlier mobilisation and eventual full union. Ligaments and tendons are affected in similar ways to solid bone by pulsed electromagnetic therapy, since they are uncalcified bone structures in themselves.

### QRS Application

For a healthy person the optimum settings are as below. This Information Sheet should be read in conjunction with Information Sheet Q2 to establish optimum settings.

#### Mat Applicator

Morning Setting 9	Mid-day Setting 6	Late Afternoon Setting 3
----------------------	----------------------	-----------------------------

#### Pillow applicator

Four (4) hourly to complement the Mat applicator  
Setting – see page 16 of the User's Manual