



Pulsed shortwave therapy patient guide

This leaflet outlines what to expect during pulsed shortwave therapy.

What is pulsed shortwave therapy?

Pulsed shortwave therapy is the application of high frequency electromagnetic energy to the body to reduce pain and swelling.

What will it involve?

A round shaped application head is placed over the area to be treated, close to or just touching the skin.

With some settings it may be possible, during the treatment to feel a sensation of slight warmth. It should not feel hot. If you experience any discomfort during treatment you must inform your physiotherapist immediately.

What are the benefits?

The electromagnetic energy can improve cell membrane permeability to fluid which helps to reduce swelling and aid both soft tissue and bone healing. It is thought to:

- Increase the white blood cells and other cells responsible for wound healing.
- Help to organise the fibrin fibre orientation and collagen deposition in the wound.
- Improve the rate of swelling going down.
- Encourage the absorption of haematomas (bruises).
- Stimulate osteogenesis (bony healing).
- Improve the healing of nerve tissue.

What conditions can it be used for?

Pulsed shortwave therapy is best used on wet, ionic, low impedance tissues. The following are examples of this:

- Muscle injuries.
- Nerve injuries.
- Areas of swelling and haematomas (bruising).
- Bony injuries e.g. fractures or bone bruising.

What are the risks?

There are certain conditions where pulsed shortwave cannot be used.

Please let your physiotherapist know if you have any of the following:

- You are pregnant.
- You are a child and treatment is required over active growth plates where you are still growing.
- You have a pacemaker. Some pacemakers can be adversely influenced by shortwave therapy. The current guidelines are that a 3 metre separation should be maintained between a patient with a pacemaker and an operating pulsed shortwave therapy machine.
- You have an electronic implant e.g. bone or nerve stimulator.
- You have a recent infection in the area.
- You are still bleeding in the area that needs treatment or if bleeding is expected (usually 4-6 hours after injury but can be longer in some patients).
- You have had recent radiotherapy (within the last 6 months) in the area to be treated.
- You have heart or circulatory problems e.g. significant vascular abnormalities, including deep vein thrombosis, emboli and severe arteriosclerosis.
- You have haemophilia and are not covered by factor replacement.
- You have a cancer or suspected cancer over the area to be treated.
- Your skin is in poor condition in the area to be treated.
- You are not able to consent to treatment.
- Avoid treatment of the abdomen and pelvis during menstruation (precautionary).

N.B. Hearing aids should be switched off during treatment.

Depending on your clinical needs and diagnosis, alternatives to pulsed shortwave therapy can be discussed with your physiotherapist.

More information about pulsed shortwave therapy may be found at www.electrotherapy.org

Useful numbers and contacts

Royal Berkshire NHS Foundation Trust
Orthopaedic Physiotherapy Department
Royal Berkshire Hospital
London Road, Reading RG1 5AN
Tel: 0118 322 7812 / 7811

Visit the Trust website at www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

Debbie Burden, RBFT Physiotherapy Department

Reviewed: August 2024

Review due: August 2026