

The Royal Liverpool and
Broadgreen University Hospitals



NHS Trust

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Together*

Patient Information

Exogen – Ultrasound Bone Healing System

Trauma and Orthopaedic Directorate

PIF 1556 V3

Your Specialist has now advised you to have Exogen ultrasound treatment to encourage healing and new bone formation.



What is Exogen?

- Exogen is a method of administering pulsed ultrasound waves directly to bone to aid and accelerate bone healing by stimulating the cells in the bone to grow quicker.
- Exogen is a lower dose than in ultrasound used for scanning.

What are the benefits of having Exogen?

The aim of the treatment is to promote bone healing. The main advantage of this treatment is that it is convenient and can be easily carried out in the comfort of your own home. You will be shown how to use the device in the clinic by a healthcare representative who will also give you details of who to contact if you have any problems.

Treatment is only 20 minutes per day at approximately the same time each day and is very simple and pain free.

You will leave the clinic with the device and all you need in one small case, the case contains, the machine, a strap for application to the fracture, gel, charger, and marker pen and instructions book.

The device needs charging as you would a mobile phone, there is a battery indicator in the top right hand corner of the screen.

How is the treatment delivered?

Treatment is applied directly to a marked area on your skin, making sure that you apply each treatment to the correct place. This area will have already been marked by your specialist when you attended clinic. Once you are ready to start, make sure that you are comfortable and have everything you need to hand for the next 20 minutes.

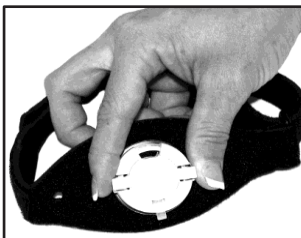
The special strap is applied so that the circular opening is centered directly over the marked area. You then need to secure the strap, making sure that it is comfortable and not applied too tightly.

Coupling gel is then applied to the transducer and inserted into the delivery port so that it is in contact with the skin. Then switch the device on using the purple button. You will need to rest and not walk around during treatment so that any movement of the strap and transducer is minimized.

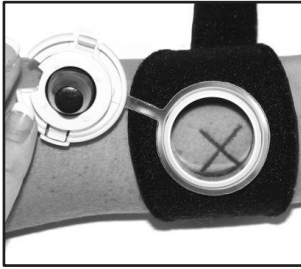
Assembly and placing strap



Hold strap with cap side up and pull end of strap through bottom of loop.



Squeeze sides of cap to open.



Position the strap with the cap placed directly over fracture site as marked by your physician.

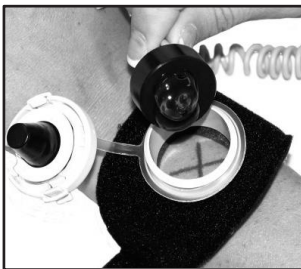


Tighten strap securely utilizing hook and loop.

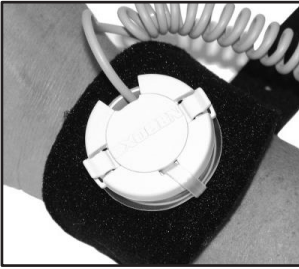
Application from gel to transducer



Remove top from gel bottle. Hold transducer where cable meets the transducer head. Place finger on pump and press down to apply one pump of gel onto transducer face (approximately small pea/toothpaste size)



Place transducer into the white cap, gel should be touching skin.



Align U shape hole in top of cap with transducer cord and snap the cap shut.

Replace top on gel bottle.

Conducting the treatments



Press On/Off button once to begin treatment



EXOGEN™ device will show you a white screen with Exogen, then a screen, and then it should begin your 20 minute countdown. If it starts to beep at you at this point, something is wrong, look at what the screen is showing and refers to the instruction book in the case or call your contact person. The Exogen will store your treatment usage information and your consultant can access this information via the chip in the device.

After the treatment has completed



Open cap. Remove transducer from cap and clean any excess gel from transducer head with a soft cloth.



Remove strap from treatment site. Clean excess gel from your skin and strap with a soft cloth.

Can I still receive treatment if I am in a cast?

Yes the Exogen can be used in a cast, a window can be cut into your cast, or alternatively the white cap from the strap application can be built into a new cast, this makes carrying out a treatment even easier for you. This will be shown to you on your fitting day.

Can I still receive treatment if I have metal implants?

You can still receive Exogen treatment. Previous studies have reported that ultrasound applied in the presence of metal implants did not produce any untoward effects.

What are the complications of having Exogen treatment?

As the procedure is not invasive and applied via the surface of the skin, there are no known contraindications to the use of the device itself.

Rarely, there have been reports of mild skin irritation caused by the coupling gel but in all cases this problem was resolved on changing the gel to a mineral oil or glycerin.

Though there was no known contraindication, there are some precautions to use:

- The safety and effectiveness of the use of this device in pregnant or nursing women has not been established.
- Careful consideration of the use of this device must be decided on an individual basis in the presence of malaligned nonunion since the device will not correct or alter displacement, angulation or other malalignment.
- Consideration must be taken when deciding on use of ultrasound treatment on fractures with gaps > 1.0 centimeters (greater than one centimeter)
- With active, implantable devices, such as cardiac pacemakers, operation may be adversely affected by close exposure to the device; therefore, evaluation during the treatment by the attending cardiologist or physician is recommended.
- Patients in the clinical studies were instructed to apply the device for one treatment period of 20 minutes each day. The safety and effectiveness of the device when used for more than one daily 20-minute treatment period is unknown.
- The age ranges of the patients in the PMA non-union studies were 17–86. The effect of the therapy on patients outside this age range is unknown.

Is the accelerated bone, normal bone?

Yes, the Exogen Bone Healing System speeds-up or restarts the normal healing process and there are no changes to the growth and development of your bone. It has no detrimental effects on your normal bone and this will not be stimulated during your treatments.

Will the treatment be effective if the bone is deep or I am overweight?

Yes, the ultrasound signal is able to reach all bones and is effective. The Exogen beam can penetrate through skin and soft tissue to reach bone up to 26.5cm (10.5 inches deep).

When will I have to be seen again in clinic?

You will normally be reviewed again in clinic for further X-rays at around six weeks following treatment, however if you feel you require an earlier review please contact your consultant's secretary on the number at the end of this leaflet.

If you have any general queries please contact the specialist nurse on the number at the end of this leaflet. Please don't feel disheartened if there is no great improvement at six weeks, by ten to twelve weeks we would hope to see some benefit on X-ray.

Patient Phone App

Please go to your relevant app store and search for 'Exogen Connects' it is a free app with fitting instruction, treatment reminders and more information.

Are there any alternative treatments available?

Your consultant may also have discussed with you the possibility of further surgery which aims to encourage the bone ends to fuse together, if this is an option.

If you are a smoker you need to stop as smoking has a detrimental effect on bone healing. If you need to seek help with smoking cessation please contact your family doctor (GP) for advice or contact an organization, such as 'Fag Ends' on telephone number 0800 195 2131

What will happen if I don't have any treatment?

If you decide not to have any treatment, your condition may take a longer time to heal or may even fail to heal altogether. It is likely that your symptoms are likely to continue or progress further.

If you have any queries or concerns, please contact the specialist nurse.

Further information

Foot and Ankle Nurse Specialist

Tel: 0151 282 6000 and ask for bleep 4634

Text phone number: 18001 0151 282 6000 Bleep 4634

Fiona Cowell/Katy Clay

Fracture clinic 0151 706 2614

Text phone number:18001 0151 706 2614

NHS Direct Service 111

Tel: 111

Alternatively, please contact the local Bioventus representative Karen Jones

Tel: 07712 888228

or

Bioventus Customer Services on

Tel: 00800 02040608

Further information can be obtained from the internet via www.exogen.com

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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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