



# Centurion

## Therapulse IV

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**Centurion Therapulse IV System**

## Introduction

Congratulations on purchasing your Centurion Therapulse from the leader in the field of magneto therapy equipment!

Around the world, equine clinics, Veterinarians and colleges are using Magnetic Field Therapy for the treatment of soft tissue and bone damage conditions.

The Centurion design team has made use of precision components, low power using integrated circuitry, and a custom designed rechargeable battery pack to bring a rechargeable, portable, pulsed magnetic field generator into our family of products.

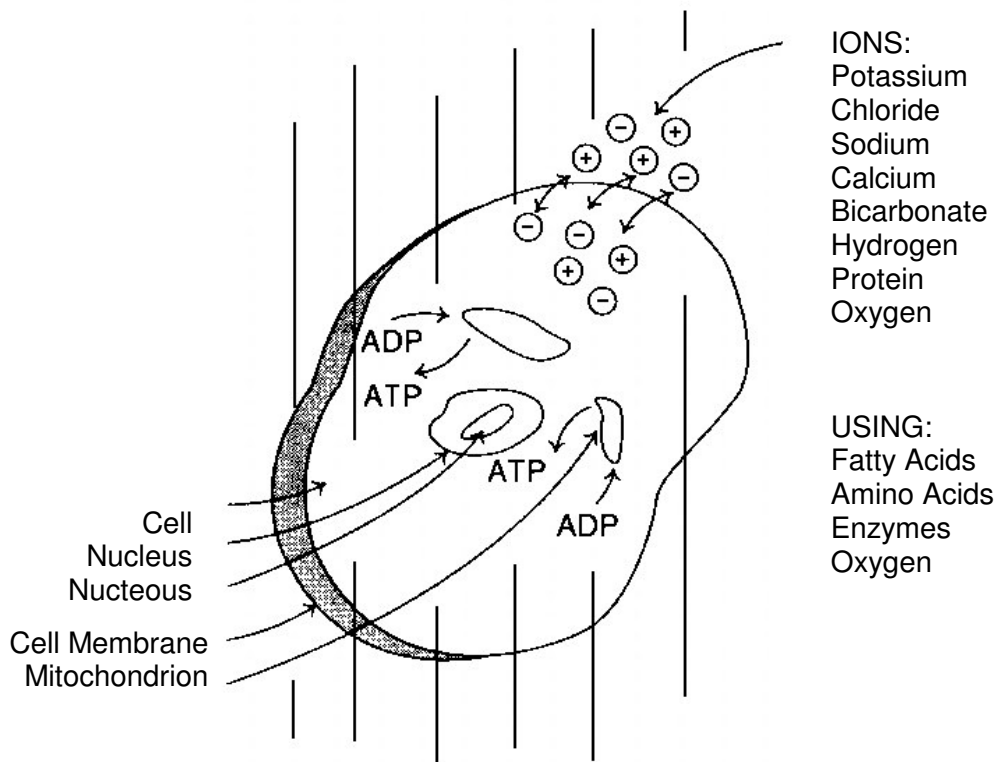
The design ensures that the maximum power possible is directed to the creation of a very "frequency stable" pulsed, magnetic field whose power output remains consistent throughout the entire treatment cycle. The battery design ensures that extended treatment cycles may be performed before recharging is required.

Our experience in the creation of therapeutic magnetic fields ensures that you have the maximum field strength possible in a portable generator to provide effective treatment of even the deepest soft tissue and bone injuries. The highest quality components are used to provide a long lasting product.

## Ionisation in a Cell

Magnetic Field Therapy (MFT) permeates all cells, enhances ion exchange, normalizes circulation, and increases the oxygen utilisation of the cell.

Normal cell potential = about 90 MV (millivolts)  
Inflammatory condition = about 120 MV  
Degenerative condition = about 30 MV



Invisible magnetic field lines 'permeate' all cells in the body simultaneously, down to the last molecular level, reaching parts of the body that cannot be influenced efficiently with other methods.

## **Explaining Magnetic Field Therapy**

Therapy with pulsating magnetic fields (PMF) is a relatively new and very effective form of physical therapy. It is not a miracle, but simply a physical (or better, biophysical) modality used for accelerated therapeutic purposes.

PMF is a very efficient and simple therapy method. By influencing the body either generally or locally with a magnetic field packed in impulse bundles, the cellular functions can be improved considerably. The pulsating magnetic field has a high biological effectiveness and is being used in the medical field as a means of therapy and as a diagnostics tool.

Magnetic fields cannot be absorbed. Therefore, it is difficult to produce field-free spaces when magnetic fields strike a material. We differentiate between paramagnetic substances, in which a bundling or a concentration of magnetic field lines occur, and the diamagnetic substances, in which a decentralization of the field lines results.

The horse's body is only insignificantly diamagnetic and paramagnetic; basically, it is neutral. So whenever field lines impact on the organism, or on parts of it, they absolutely permeate these areas. Compared to known methods, this is the first important discovery. Within the range of magnetic fields, all parts of the body are penetrated completely by the field lines.

Human and animal organisms consist of a large number of cells which function electrically. If there is no electrical potential left in the cell, it is no longer viable. These cells have a basic (or rest) potential that is necessary for normal cellular metabolism.

Diseased or damaged cells have an altered rest potential. If the ions (electrically charged particles surrounding the cells) move into an area of pulsating magnetic fields, they will be influenced by the rhythm of the pulsation. The rest potential of the cell is proportional to the ion exchange occurring at the cell membrane.

The ion exchange is also responsible for the oxygen utilization of the cell. Pulsating magnetic fields can dramatically influence the ion exchange at the cellular level and thereby greatly improve the oxygen utilization of diseased or damaged tissues. The deterioration of the oxygen utilization is known to be a problem in several medical branches, especially delayed healing and arthritis of joints. Thus, the wide range of indications include:

1. Orthopaedic conditions - fractures and bone damage conditions;
2. Open wounds and circulatory problems;
3. Soft tissue problems - sore backs, muscle tightness, body soreness;
4. Acute inflammation;
5. Chronic pain.

From clinical experiments, we know that pulsating magnetic fields can reduce pain sensations almost immediately. This is due in part to the increase in the oxygen partial pressure in the terminal tissue and the increase in the local perfusion and velocity of the capillary blood flow alleviating the accumulation of metabolites due to small vascularization and blood flow (transmitted by the sympathetic nervous system).

There are no contra-indications to magnetic therapy except in cases of haemorrhage. In contrast to chemical medicaments, there is no chance of over dosage, at least within the field range that is presently used for treatments.

The PMF therapy is heatless; therefore all implants (metal or plastic) can be treated. Hospitals use PMF therapy to accelerate the healing of patients with pins and bone plates because no damaging heat is produced in the implants. Fractures can be treated, even through a leg wrap, since magnetic fields permeate all materials.

The therapeutic effect of such treatments lasts for approximately six to eight hours. Most chronic cases require treatments twice a day. Only after five to ten days can the treatment regime be reduced to one treatment daily or every other day. In chronic or extremely difficult cases, this may take longer.

### **ABC's of Magneto-therapy**

It is important to understand the effects that each setting will have upon the cells of the horse's body. By knowing your horse and how the equipment works, you can more effectively use the therapy.

To effectively treat most conditions, and to enhance the success rate, please follow these priorities.

#### **PRIORITIES:**

1. Reduce Pain and Inflammation
2. Stimulation
3. Increase Circulation

### **How to Use Your Therapulse**

#### **Settings:**

Frequency measures the number of pulses per second (Hertz-Hz). The frequency is by far the most important setting.

On the Control Panel, the settings relate to the 3 Priorities previously mentioned:

- 2 Hz - Pain & Inflammation
- 15 Hz - Stimulation
- 30 Hz - Increase Circulation

However, depending upon the condition involved, different settings may be recommended. The Centurion Therapulse is designed so that you can choose the frequencies most appropriate.

Normal magnetic energy measures 8-10 Hz. A setting of 2 Hz. is below normal magnetic energy and causes the capillaries to constrict. This is very important when dealing with "Pain & Inflammation". Many people find that this setting is used a great deal.

Conversely, a setting of 15 Hz and 30 Hz are both higher than normal magnetic energy and cause the capillaries to expand. This is very important for increasing the blood flow to the injured area. A setting of 30 Hz. is that much more stimulating than 15 Hz.

**It is extremely important to always start at the Frequency setting of 2 Hz.**

It is important to start at 2 Hz for the following reasons:

1. It has a very calming, relaxing effect on the body and will precondition the body to the therapy.
2. It will reduce the pain and inflammation in the body very quickly in most cases.
3. This setting will induce constriction of the capillaries

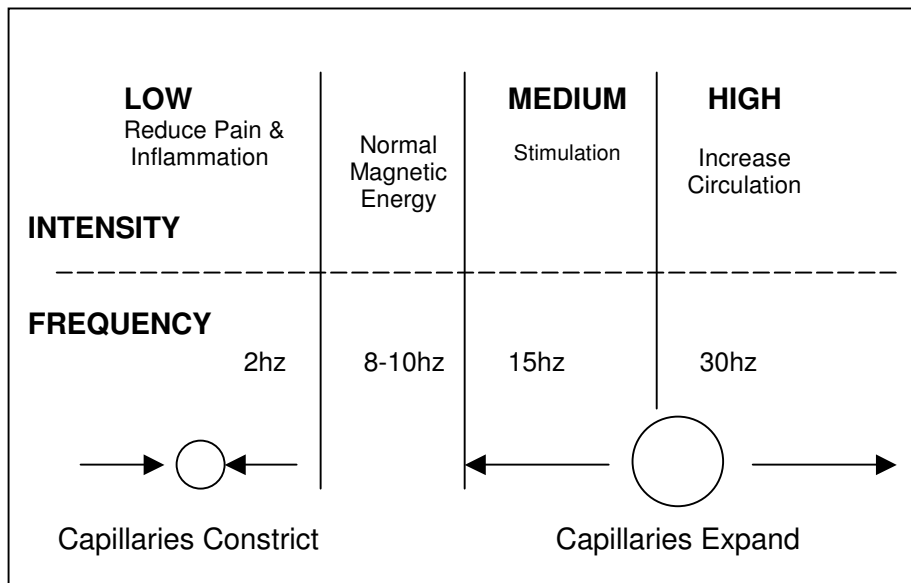
This setting should be maintained for the first 3 days of treatment.

**As long as there is still pain in the treated area, stay on the low setting of 2 Hz. until the heat has come out of the tissue.**

Once any pain and inflammation has been alleviated, you can start increasing the settings by using the 15 Hz. (medium) setting. This "stimulation" setting will cause the capillaries to expand and begin to increase blood flow in the area. This will, in turn, stimulate glands, tissue and muscles. The medium setting is ideal for soft tissue problems. It is best to stay on this setting for 3-4 days.

The high setting of 30 Hz will greatly increase circulation. The important thing to remember is that if any heat returns to the injured area, the frequency should be put back to 2 Hz.

This graph provides a quick reference for Centurion settings.



The setting may be adjusted each day depending on what's happening. Work the setting up slowly; don't be in a hurry. If heat returns, or soreness is still evident, place the settings back to 2 Hz (low).

**It is extremely important to be on the right setting at the right time.**

Time:

The Centurion Therapulse is timed for 30-minute treatments. However, because of the safety of the therapy, there are no maximums. A buzzer will sound when the 30 minutes are up and the therapy will stop. Experience suggests the more often - the better. Perhaps with a morning and an afternoon treatment, you will experience more rapid results. On a bone damage condition, one-hour treatments are recommended.

The normal treatment time is 30 minutes once per day but there are some exceptions.

1. For serious problems, the therapy should be used twice a day. This might continue for the first 7 - 14 days or longer.
2. If a brand new injury should occur, the faster you can begin therapy, the better. Use two treatments of one hour during the first 2 days, then return to the normal treatment program.
3. For bone damage problems, it is advisable to use one-hour treatments.

When using Magneto-therapy, it is not necessary to stop using any rubs or solutions, with one exception; when using iodine based leg paints, do not use 2 Hz setting. The iodine induces heat and the 2 Hz does the opposite. You may use iodine rubs with the higher settings of 15 Hz and 30 Hz. In summary, make sure that you are achieving the same results with each treatment method; liniments, medication and settings on the equipment should be working together.

Some things to watch when you start therapy:

1. A more relaxed feeling will be felt by the body
2. There may be a more frequent occurrence of urination for the first week. This is due to the fact that all the cells in the cleansing organs are being exposed to the magnetic field and should work more effectively.
3. More rapid hoof growth may occur.
4. Hair growth may accelerate.

### **The Centurion Therapulse Equipment List**

The equipment received includes:

Therapulse Blanket  
Control Unit  
2 Battery Packs  
2 Recharging Units  
Test Magnet  
Manual  
Carrying Case

To begin each treatment, after the Centurion equipment is positioned for use, select the desired setting; push on the "power" switch. A buzzer will sound for two seconds to indicate the unit is operational and the light above the selected setting will illuminate. To initiate the treatment, press the "start" button and an indicator light above the start button will pulse at the selected frequency rate.'

Further confirmation of operation can be made by testing for the presence of a pulsing field with the test magnet held in your fingers against the Centurion machine. This magnet is strictly a test device. Each time the Centurion is used, the magnet should be utilized to test the pulsing field.

The Centurion Therapulse is battery operated and it is cautioned that only a Centurion charger be used to recharge the system. It is important to follow this guideline as a risk of damage to the unit may result if unapproved parts are used.

#### **RECHARGING THE THERAPULSE IV**

The Therapulse IV will provide 6 to 8 hours of treatment time, and the LED will light up when charging is necessary. Remove the battery packs and connect to the charger by way of the special three prong plugs, then plug the charger into any 240 vac (UK) electrical outlet.

A full recharge cycle will take 14 hours. Care must be taken not to exceed the recommended charging time as damage may result to the battery packs. Unplug the charger from the main power supply before removing the plugs to the charger jack.

The Centurion Therapulse IV is designed to provide years of trouble free service. However, if a maintenance problem does occur, simply call the service number found on the back of this manual.

**CAUTIONS:**

1. It is important not to spill any liquids onto the Therapulse control unit as this could damage the electronics. If this should happen, it would be wise to call the service number.
2. It is also important not to cut or tear the cords of the equipment. If a break does occur, please call the service number immediately. It is unwise to use the equipment when the cords are not 100%.

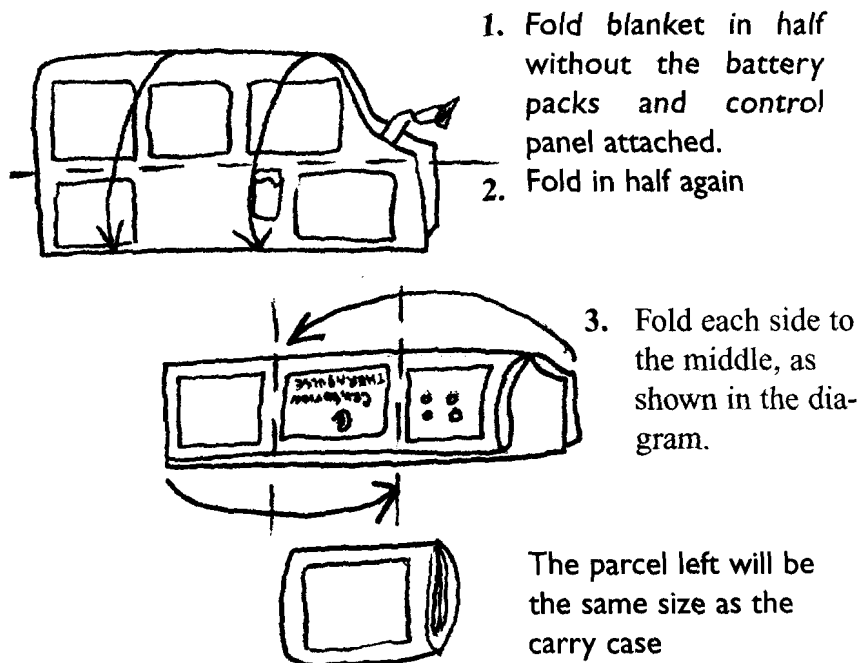
**PROPER CONNECTION OF THE THERAPULSE**

The Centurion Therapulse blanket can be place on the body as easily as any blanket. There are two pockets on each side for the batteries to be inserted, insert the battery pack and connect the special 4 pin connector, found near the pocket, to the top of the battery.

Connect the "Control Unit" to the blanket by way of 4 snaps found on the left side of the blanket. Connect this unit to the blanket by plugging in the special 3 pin connector attached for this purpose.

Continue operation of Therapulse according to directions.

After using the Therapulse, fold properly and put back into the carrying case. This ensures that all internal coils will not be damaged.



### Commonly Asked Questions

- Q 1 Is it normal for a horse to feel relaxed during or after a treatment - especially on the low settings?
- ANS Yes -The low setting of 2 Hz has an extremely relaxing effect on the body.
- Q 2 How does this therapy compare with traditional laser therapy?
- ANS While laser therapy has been shown to be effective on surface injuries and acupuncture points, magnetic field therapy has a more effective depth penetration and coverage area thus making it very effective with deep soft tissue and bone damage problems.
- Q 3 Can Magnetic Field Therapy be used in conjunction with other therapies?
- ANS Yes. The therapy can be used by itself or in combination with other therapies.
- Q 4 Will Magnetic Field Therapy make a champion of my horse?
- ANS No. This would be impossible. However, by utilizing the therapy, the animal should be performing closer to its potential.
- Q 5 Will I have guaranteed results from using Magnetic Field Therapy?
- ANS No! No therapy or drug will ever be 100% successful in treating all conditions. As each animal is different, the results can vary from one to another.

#### WARRANTY

Your Centurion Therapulse has a one-year warranty from the date of purchase or first day of rental. The unconditional warranty covers any and all problems and includes labour and replacement parts (freight excluded). The battery is also covered for one year.

Any repairs or service work done by an unauthorized person or company will void the warranty immediately.

An extended warranty package is available to cover any problems, which might arise after the first year. This inexpensive plan covers all parts and will facilitate service.

The warranty is honoured from any of our service centres in North America or dealers around the world.

Centurion Systems UK & Ireland Ltd  
51 Connor Road, Parkgate,  
Templepatrick, Ballyclare,  
Co Antrim BT39 0EA  
Northern Ireland - UK

Phone - +44 (0)28 944 33 666  
Fax - +44 (0)28 944 32 817  
[www.centurion-systems.co.uk](http://www.centurion-systems.co.uk)