

GLOBUS
ITALIAN EXCELLENCE

MAGNETOTHERAPY

Quick guide to positioning the solenoids and the treatment protocols



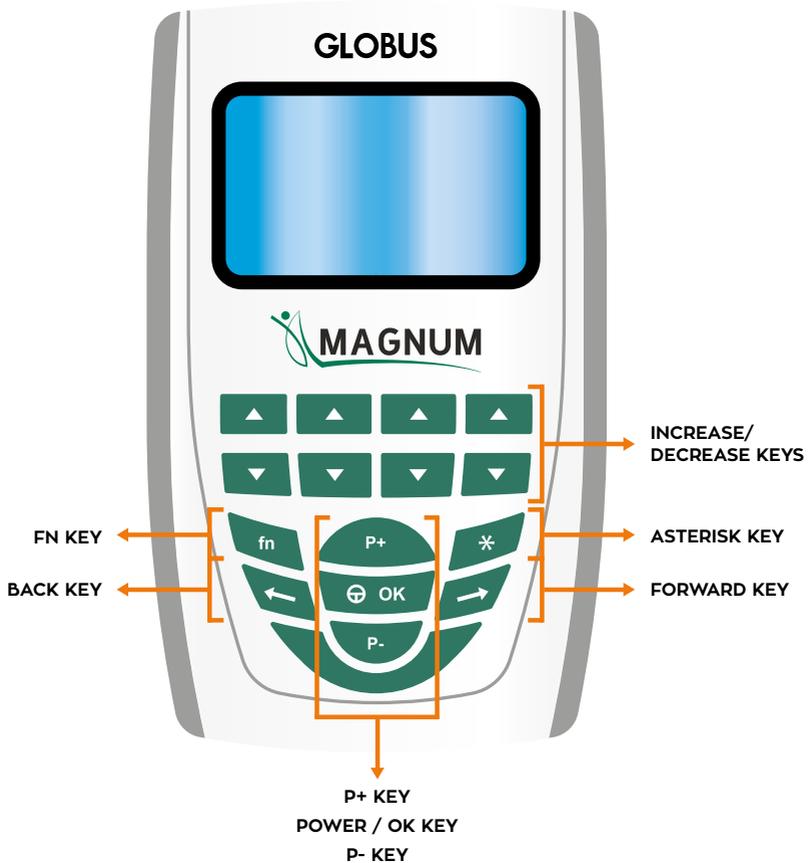
ATTENTION

Please note that this guide offers only general information on the functions of **GLOBUS** magnetotherapy devices and the positioning of the different types of solenoids on the various parts of the anatomy. For more detailed information on the specific treatments of each **GLOBUS** Magnum model (list of programs), please refer to the User Manual supplied with your device.

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MAIN FUNCTIONS OF THE KEYPAD



INCREASE/DECREASE KEYS: press the up arrow to increase a parameter (Gauss, Frequency, Time, D.C%), or the down arrow to decrease it

FN KEY: press this key during a treatment to change the parameters (Gauss, Frequency, Time, D.C%)

ASTERISK KEY: press this key to display the peak Gauss values during treatment

BACK KEY: press this key to return to the previous screen

NEXT KEY: press this key for 3" during a program to move on to the next step and save it in the "last 10 run"

POWER / OK KEY:

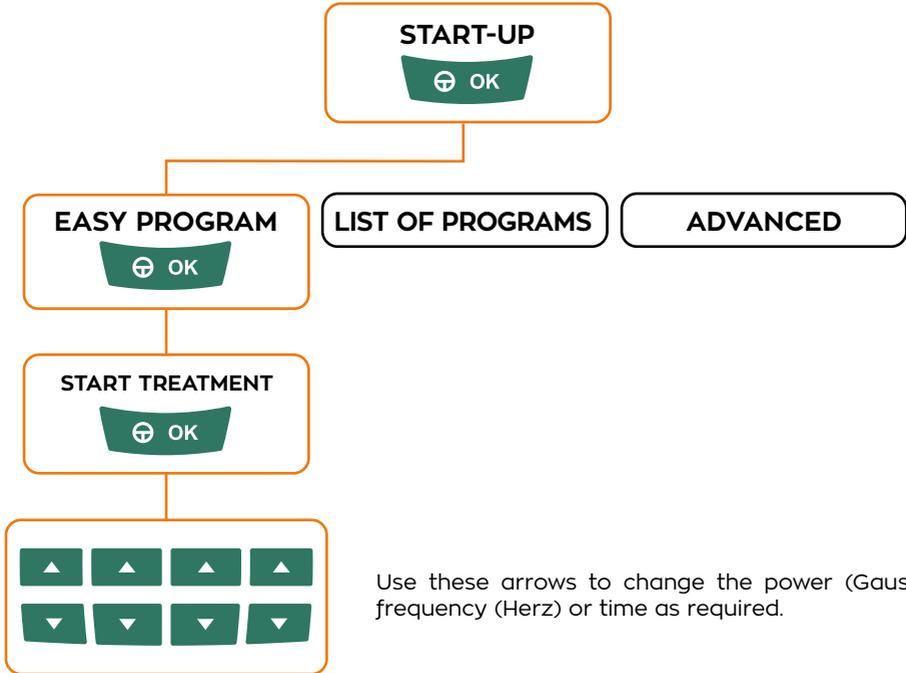
- press this key for 3 seconds to switch the device on/off;
- while navigating the menu, use this key to confirm your choice;
- once a treatment has started, press this key to pause it and to restart it

P+ KEY: press this key to move the selection upwards

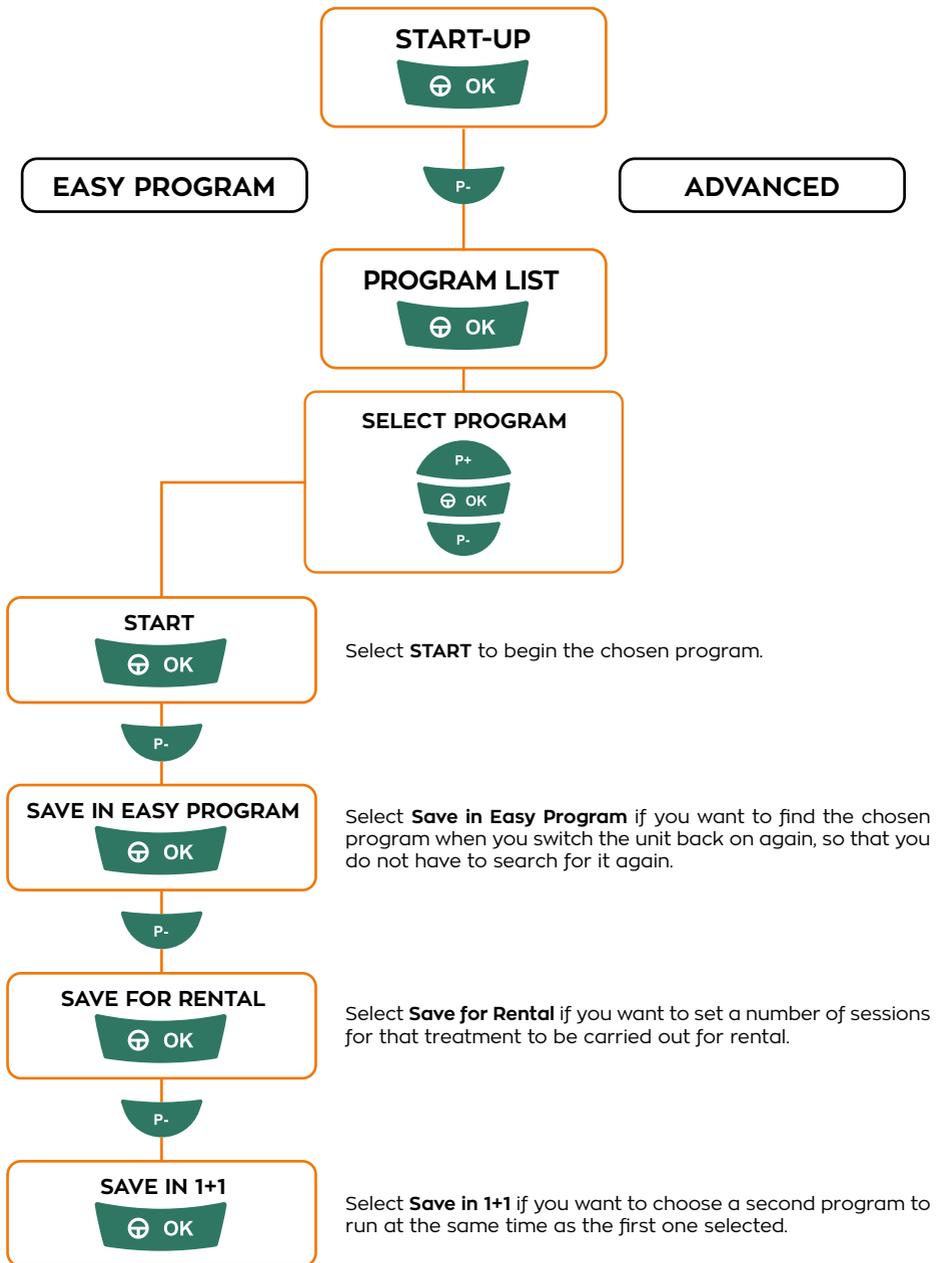
P- KEY: press this key to move the selection downwards

METHOD OF USE | EASY PROGRAM

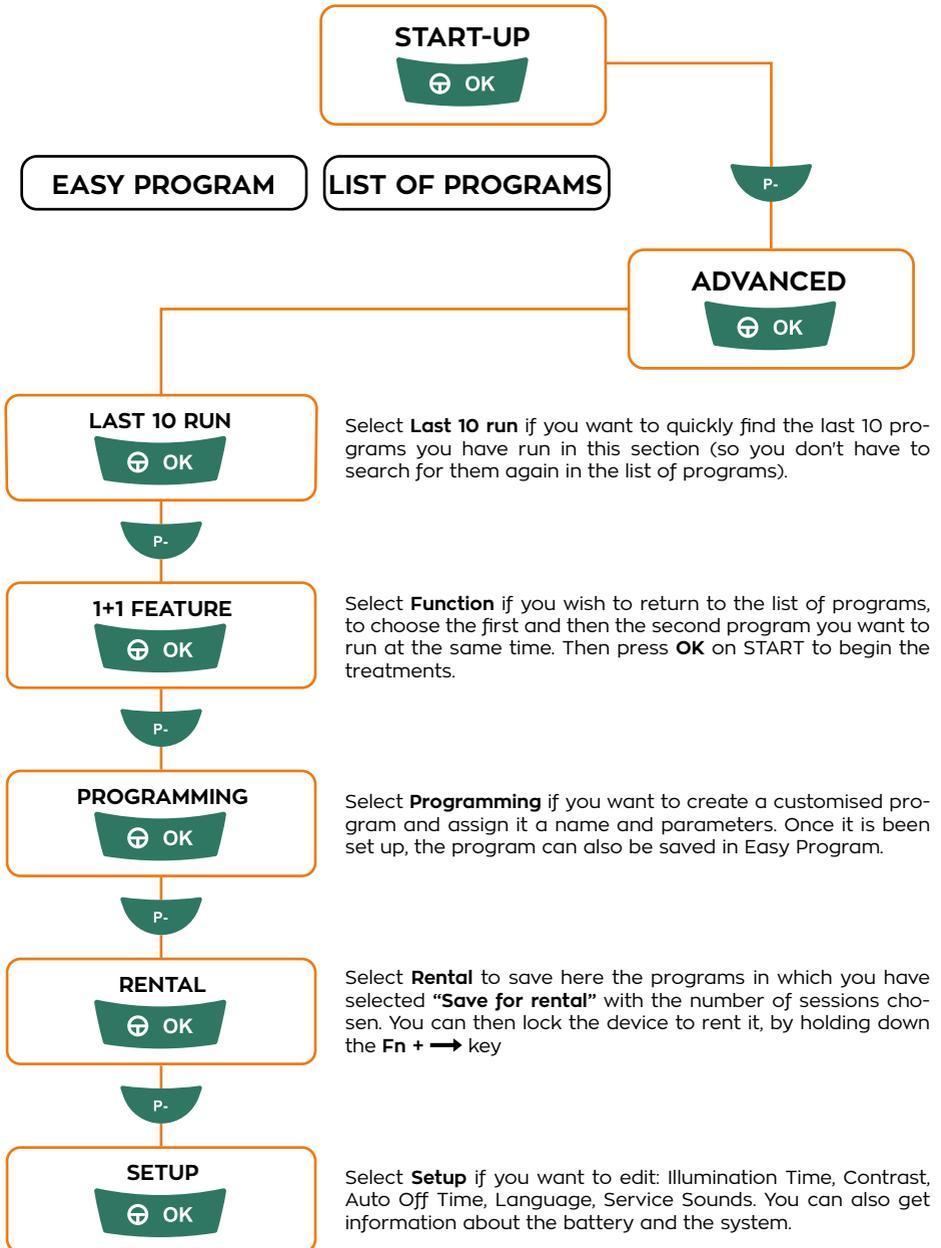
Use the **EASY PROGRAM** function if you already have the parameters to set, or to quickly start a preset program



METHOD OF USE | PROGRAM LIST



METHOD OF USE | ADVANCED



PRINCIPLES OF APPLICATION OF THE SOLENOIDS

Magnetotherapy is a form of physical therapy that uses electromagnetic energy to stimulate the regeneration of biological tissues.

On a physical level, we have a **device** and **solenoids** available. The solenoids are connected to the device which, once powered, allows the generation of an electromagnetic field with very specific characteristics.

There are four parameters that the operator can vary on the device: **frequency** (Hz), **time** ((hours and minutes), **intensity** or field density (Gauss) and **duty cycle** (DC).

- The frequencies used in the Magnum devices go up to 200 Hz. The low frequencies are in fact the most used in the medical field to treat osteoarticular pathologies. Each program present in the device has its own specific frequency, obtained from a constant and scrupulous bibliographic research.
- The time (duration) of each session varies greatly depending on the pathology. For example, classic orthopedic pathologies such as pseudarthrosis or osteonecrosis require 6 to 8 hours of treatment per day for cycles of at least one month. Painful pathologies, on the other hand, such as low back pain, require more limited treatment times (for example 30 minutes a day for a 20-day cycle).
- The intensity of the field is measured in Gauss and is an important parameter to obtain a good efficacy in the treatment. In the absence of a medical prescription indicating the Gauss to be applied, we recommend that you follow the preset parameters in the devices.
- For duty cycle (DC) we mean the pulsed time (as we are talking about pulsed electromagnetic fields). When the duty cycle is 100% we speak of continuous emission, if it is less than 100% we speak of pulsed emission. In our appliances the duty cycle is set at 50% but can also be changed to lower values. For home use, we advise you not to change the preset value.

SOLENOIDS transfer the electromagnetic field and go in direct contact with the area to be treated.

FLEXIBLE SOLENOIDS are formed by two coils placed in a side which presents the elastic fabric at the center and two Velcro bands on the sides to facilitate placement on the different anatomical districts.



The side with the lettering **S** indicates the South of the solenoid while the side with the lettering **N** indicates North. The flexible solenoids can be fixed above the area to be treated using the special Velcro straps supplied.

POCKET PRO SOLENOIDS are a pair of solenoids formed by two coils for each bearing. Polarity is indicated on each bearing with the letters **N**, for North, and **S**, for South. These solenoids must also be fixed to the body by inserting an elastic band supplied under the slots (horizontally or vertically) and closing it back on itself.



HOW TO APPLY THE SOLENOIDS

TWO OPPOSING SOLENOIDS: with two opposing solenoids (therefore in contact with the skin one will have the N side and one the S side) and parallel to each other, a deep and uniform electromagnetic field is obtained. This method is indicated for the treatment of joint diseases and fractures.



TWO SOLENOIDS SIDE BY SIDE: this method provides for the positioning of the solenoids on the same plane and is mainly used for the treatment of large areas, for example, thigh or back and in any case where it is not possible to oppose. With the positioning of the solenoids side by side, the polarity in contact with the skin is indifferent, so there could be two north or two south sides or even one north and one south as happens when using a flexible solenoid.



ONE SOLENOID: this method is used in areas of the body where it is difficult to place two diffusers. It can be applied from the N side or from the S side.



MAIN POSITIONINGS WITH THE TWO TYPES OF SOLENOIDS

The main positions to be used with the various accessories available with Magnum devices will be indicated below. We recommend using the solenoids on top of light clothing or placing a light cotton cloth (such as a handkerchief) between the skin and the accessory.

CERVICAL TRACT

Treatment indicated for:

- ***cervical arthrosis-arthritis;***
- ***cervical joint pain;***
- ***cervical muscle tension.***

In case of pain in the cervical area it is recommended to place the solenoids side by side and to lie down on the bed or sofa during the treatment, resting the head on a pillow.



SHOULDER

Treatment indicated for:

- ***tendinopathies and trauma to the rotator cuff;***
- ***arthrosis-arthritis-joint pain in the shoulder;***
- ***shoulder edema and bruises;***
- ***shoulder fractures;***
- ***delayed consolidation of fractures;***
- ***osteoporosis.***

In all shoulder problems it is preferable to use the opposite positioning.



ELBOW - FOREARM

Treatment indicated for:

- **fractures of the forearm or elbow;**
- **delays in fracture consolidation;**
- **edema and bruises on the forearm or elbow;**
- **osteoporosis;**
- **tendinopathies.**

At forearm level it is preferable to use the positioning with opposing solenoids. The solenoids can also be placed on plaster casts and braces.



WRIST

Treatment indicated for:

- **carpal tunnel;**
- **wrist fractures;**
- **delays in fracture consolidation;**
- **edema and bruises on the wrist;**
- **arthrosis-arthritis-joint pain in the wrist;**
- **osteoporosis.**

In all wrist problems it is preferable to use the opposite positioning.



HAND

Treatment indicated for:

- **fractures to the carpal-metacarpal bones;**
- **delays in fracture consolidation;**
- **edema and bruises in the hand;**
- **arthrosis-arthritis-joint pain in the hand;**
- **osteoporosis.**



DORSAL-LUMBAR TRACT WITH “POCKET PRO” SOLENOIDS

Treatment indicated for:

- **osteoarthritis-arthritis-joint pain in the spine;**
- **vertebral fractures;**
- **delays in fracture consolidation;**
- **back pain-low back pain;**
- **osteoporosis.**

In case of pain in the spine, the solenoids should be positioned side by side in the most painful points.

If the area to be treated is very large, it is advisable to use two bands by placing them next to each other (or the band with 4 solenoids, which can be purchased as an accessory). During the treatment we recommend lying on your back on the bed or sofa, in order to keep the solenoids still with your back.



TRATTO DORSO-LOMBARE WITH "FLEXIBLE" SOLENOID

Treatment indicated for:

- **osteoarthritis-arthritis-joint pain in the spine;**
- **vertebral fractures;**
- **delays in fracture consolidation;**
- **back pain-low back pain;**
- **osteoporosis.**

In case of pain in the spine, the solenoids should be positioned side by side in the most painful points.

If the area to be treated is very large, it is advisable to use two bands by placing them next to each other (or the band with 4 solenoids, which can be purchased as an accessory). During the treatment we recommend lying on your back on the bed or sofa, in order to keep the solenoids still with your back.



HIP

Treatment indicated for:

- **arthritis, osteoarthritis, joint pain in the hip;**
- **femoral neck fractures;**
- **osteoporosis;**
- **edema and contusions in the hip;**
- **post hip replacement.**

In the hip it is very difficult to position the solenoids in opposite mode, so the placement is always with the solenoids side by side.



THIGH - KNEE

Treatment indicated for:

- **arthritis-osteoarthritis and joint pain in the knee;**
- **post knee replacement;**
- **post ACL surgery (anterior cruciate);**
- **post knee cleansing surgery;**
- **trauma-contusions to the thigh.**

In the knee it is preferable to use the positioning with opposing solenoids. If it is not possible to position the band in such a way as to make the solenoids parallel to each other, it is advisable to position them side by side, above the joint or in the most painful area.



TIBIA/FIBULA - ANKLE

Treatment indicated for:

- **fractures of the tibia and / or fibula;**
- **delays in consolidation of fractures;**
- **edema and contusions of the tibia or fibula;**
- **osteoporosis;**
- **edema and bruises of the ankle;**
- **sprains and ankle.**

At the level of the tibia and fibula it is preferable to use the positioning with opposing solenoids, especially in case of fractures and consolidation delays.

At the level of the ankle it is preferable to use the positioning with opposing solenoids, one on the internal side and one on the external side of the joint.



FOOT

Treatment indicated for:

- *ractures to the tarsal or metatarsal bones;*
- *delays in fracture consolidation;*
- *edema and bruises on the foot;*
- *arthrosis-arthritis-joint pain in the foot;*
- *osteoporosis;*
- *hallux valgus;*
- *tendinopathies/plantar fascia pain.*



USE OF THE TAPPETINO “SOFT 4” MAT



“SOFT 4” mat for cervical tract: this positioning is recommended if the pain is localized in the neck (see therapeutic indications for the cervical tract). It does not matter which side of the mat comes into contact with the body. Place the mat on the area to be treated and secure it with the elastic bands supplied by passing it around the shoulders or lying on top of it in bed or on the sofa.



“SOFT 4” mat for dorsal tract: this positioning is recommended if the pain is localized in the back area, between the base of the neck and the lumbar area (see therapeutic indications dorsal-lumbar tract). It does not matter which side of the mat comes into contact with the body. Place the mat on the area to be treated and secure it with the supplied elastic bands by passing it around the chest or lying on top of it in bed or on the sofa.



“SOFT 4” mat for lumbar spine: this positioning is recommended if the pain is localized in the lumbar and sacral area (see therapeutic indications back-lumbar). It does not matter which side of the mat comes into contact with the body. Place the mat on the area to be treated and secure it with the supplied elastic bands by passing it around the stomach or lying on top of it in bed or on the sofa. Alternatively, place it inside a girdle or stretch pants.



“SOFT 4” mat for hip: this positioning is recommended if the pain involves the hip joint (see hip therapeutic indications). It does not matter which side of the mat comes into contact with the body. Place the mat on the area to be treated and secure it with the supplied elastic bands by passing it around the pelvis or lying on the side above it in bed or on the sofa. Alternatively, place it inside stretch pants.

INDICATIONS ON THE PROGRAMS

Foreword: below you will find some general indications on the programs present in the various Magnum devices. It is recommended to use it at home with a precise medical indication.

Attention: being a general list that covers all the models of the Magnum line, it is not certain that the programs listed here fall within the device in your possession. To learn about the programs of your device, refer to the "Program list" chapter of this manual.

FRACTURES: fracture programs can be used from the first few days after the traumatic event. The treatment can also be carried out on plaster casts and braces. In this case we recommend increasing the recommended power by 50-60% as the thickness of the plaster increases the distance between the solenoids and the bone.

We remind you the importance of positioning the solenoids in opposite mode (if the area to be treated allows it) and in correspondence with the fracture. If you have two applicators, you can position them both to have a more enveloping and intense magnetic flux. This is particularly useful when the area to be treated has a large diameter, for example a femur or over a tibia cast.

Recommended protocol: 8 hours per day for 30 days

OSTEONECROSIS: this program can be used in cases of lack of or insufficient blood supply to a portion of bone diagnosed with X-ray or MRI. (This condition can occur as a result of trauma or, in others, it may be non-traumatic and in these cases will be affected by chronic corticosteroid use or excessive alcohol consumption.) For a personalized protocol, please refer to the instructions of the attending physician.

Recommended protocol: 8h/days for 5 months

BONE EDEMS: the program is indicated in case of trauma to the bones that involve the abnormal accumulation of fluids inside them. The main cause of this condition is in fact strong blunt trauma. Osteoarthritis is the second leading cause of bone edema. For a personalized protocol, please refer to the instructions of the attending physician.

Recommended protocol: 8 hours a day for 30 days

FRACTURE CONSOLIDATION DELAY: questo this program can be used in cases where a fracture is not healing within the terms deemed appropriate. Often these situations occur in people with osteoporosis or with vascular/metabolic alterations. Whenever possible, the solenoids should be positioned in opposing mode. The daily treatment time can vary from a few hours up to 10-12 hours.

NB For a more precise and personalized protocol, we refer you to the instructions of your doctor.

Recommended protocol: 3 to 8 hours per day for 30 days

PSEUDOARTROSIS: the program is indicated when the delay in consolidation of a fracture has lasted beyond nine months. Often in these cases the patient has already undergone surgery and/or is in the presence of means of synthesis, plates, screws or external fixators that can complicate the fixing of the solenoids. For this reason, consultation with the treating physician is essential, who can give more specific and targeted indications to the patient's situation.

Recommended protocol: 8 hours per night for 5 months

OSTEOPOROSIS: the program is indicated in cases where there is a progressive weakening of the bone structure due to this pathology. Bone tissue is vital and its remodeling mechanism is continuous throughout our life. In the presence of osteoporosis this mechanism is altered and produces the progressive weakening of the bone. Pulsed electromagnetic fields are able to activate the anabolic functions on bone tissue, improving the balance between osteoblasts (cells responsible for producing new bone) and osteoclasts (cells responsible for bone erosion). For treatment on large areas of the body, it may be useful to use it with the Mat 100 rug or the B-Mat (*paid accessories; for more information you can visit our website www.globuscorporation.com*).

Recommended protocol: 8-10 hours per day for 12 weeks

OSTEOARTHRITIS, ARTHROSIS, ARTHRITIS, JOINT PAIN, BACK PAIN: in our devices there are various programs to treat these pathologies which, although very different in the cause that provoke them, are all characterized by joint pain accompanied by stiffness. In these situations, magnetotherapy contributes by producing a local anti-inflammatory effect with analgesic action. Each program is set with the parameters recommended in the bibliography, while at the end of this manual you will find indications for the correct positioning of the solenoids in the various joints.

OSTEOARTHRITIS, ARTHROSIS, ARTHRITIS

Recommended protocol: 30 min. per day for 6 weeks

JOINT PAIN

Recommended protocol: from 15 to 40 min. per day for 3 weeks

BACK PAIN

Recommended protocol: from 20 to 45 min. per day for 3 weeks

ALGODYSTROPHY/SUDECK'S DISEAS: this program can be used in case of diagnosis of algodystrophic syndrome following the immobilization of a limb with a plaster repairing a fracture or in cases of repeated microtrauma, especially in the foot, in the instep, in the wrist and hand. The affected limb usually presents in a first phase edema, redness, heat and intense pain, especially under load.

Recommended protocol: 4-6 hours a day for 4-8 weeks

HIP AND KNEE PROSTHESES: these specific programs are suitable for recovery after an implant. In fact, pulsed electromagnetic fields favor the implantation of the prosthesis and any bone grafts. As for the application times, the scientific literature suggests treatments of at least 3-4 hours a day, but also in this case the treating doctor may prescribe different application times.

Recommended protocol: 3-4 hours a days for 60 days

POST SURGERY OF THE KNEE: these are specific programs to be used after reconstruction of the anterior cruciate ligament (ACL) or after a cleansing of the cartilage. In these cases, the use of pulsed magnetic fields, from the first days after surgery, reduces pain, edema and inflammation allowing a faster recovery.

Recommended protocol: 4-6 hours a days for at least 60 days

CARPAL TUNNEL: the program is indicated from the first manifestations of the disorder. It is at this stage, therefore, that clearer improvements can be perceived. Carpal tunnel syndrome, in fact, is a pathology due to the compression of the median nerve, which from the forearm descends to the hand passing through a channel called the carpal tunnel. The magnetic fields will contribute to the reduction of pain, will have an anti-inflammatory effect and will allow an improvement in the mobility of the hand and fingers.

Recommended protocol: a cycle of 30' per day for at least 15 days.
If necessary repeat another cycle

TENDINITIS, EPICONDYLITIS, HEADSET DISORDERS OF ROTATORS: these programs have been inserted to treat inflammatory processes localized in the tendons and insertional disorders. The solenoids should be positioned over the painful area and, when possible, opposed positioning is preferred. Treatment with electromagnetic fields can be carried out both during the acute phase, perhaps in combination with other physical therapies or drugs prescribed by your doctor, and during the subacute phase as a conservative treatment.

TENDINITES, EPICONDYLITIS

Recommended protocol: 30 min. per day 5 times a week for at least 3 weeks

ROTATOR CUFF TENDON DISORDERS

Recommended protocol: 3-8 hours per day for 4 weeks

GLOBUS

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DOMINO S.R.L. - Via Vittorio Veneto, 52
31013 Codognè (TV) - Tel. (+39) 0438.7933



globuscorporation.com