Focus Shockwave Therapy
Operating Manual

Attention

Respected user：

Thank you for choosing the instruments which carefully designed and manufactured by our company.

In order to better utilize the product, we sincerely recommend:

◆◆ Please read this manual carefully before using the instrument.

◆◆ Please install, use and operate correctly according to the requirements in the manual.

◆◆ Do not disassemble or modify any parts of this machine.

◆◆ Except for authorized personnel of the company, it is strictly forbidden to open the cover and disassemble the host.

◆◆ Non-professionals are strictly forbidden to carry out repairs and renovations.

◆◆ If there is any malfunction during the operation, please contact us.

Due to continuous improvement, update, and replacement of the product, the products received may not be exactly same as the illustration in the manual. We sincerely apologize.

Notice： Please read this manual carefully before operating this machine.

READ BEFORE USE

- ✓ The machine must be powered off to insert the applicator.
- ✓ When pulling out the applicator, the machine must be powered off.
- ✓ The machine must be filled with distilled water or pure water before use.

Password: 888888

Preparation And FAQ Before Use

Question 1: How to fill in water to the machine?

Answer: **Please refer to the video instructions when filling water**

After filling water into the machine, we need to change the water every 2 weeks. The aim is to maintain the water system. Drain away the water first and then fill in water again. And the water should be distilled or purified water.

Question 2: Why should I fill in water into the machine?

Answer: Because the machine adopts water system and before the delivery we will drain away water to avoid the water coming out during the international transportation. So if you need to move it to a far workplace, you also need to drain away water in the machine and put it into the aluminum box with foam for protection.

Question 3: What kind of water should I fill into the machine and why?

Answer: **Distilled water or purified water** because there is no waste in such water. The waste of the normal water may produce incrustation and damage the water-cooled system.

INTRODUCTION

1) Principles of Focused Shock wave Therapy:

High-energy acoustic waves generated through electromagnetic induction, focused on a specific target area. Creation of cavitation bubbles (small gas-filled cavities) in tissues, which collapse and generate secondary shockwaves, enhancing the therapeutic effect.

2) How shock waves are generated?

An electrical current passes through an electromagnetic coil, creating a rapidly changing magnetic field. This magnetic field induces a current in a metal membrane or diaphragm, leading to its rapid movement. The movement generates an acoustic pressure wave in the surrounding medium (usually water).

3) **Indications and Contraindications:**

Common Indications for Electromagnetic FSWT:

- Tendinopathies: Chronic inflammation of tendons, such as in the Achilles or rotator cuff.
- Myofascial Trigger Points: Treatment of painful, hyperirritable spots in skeletal muscles.
- Plantar Fasciitis: Relief of heel pain caused by inflammation of the plantar fascia.
- Calcific Shoulder Tendinitis: Dissolution of calcium deposits in the shoulder tendons.
- Nonunion Fractures: Stimulation of bone healing in cases where normal healing has not occurred.

Contraindications:

- Pregnancy: Risk to the fetus.
- Active infection at the treatment site.
- Malignant tumors in the treatment area.
- Blood clotting disorders or use of anticoagulants.
- Presence of a pacemaker or other electronic implants.
- Open wounds or skin lesions at the treatment site.

EQUIPMENT AND SET UP

[1] **Product Appearance** (For reference only, subject to the actual product)

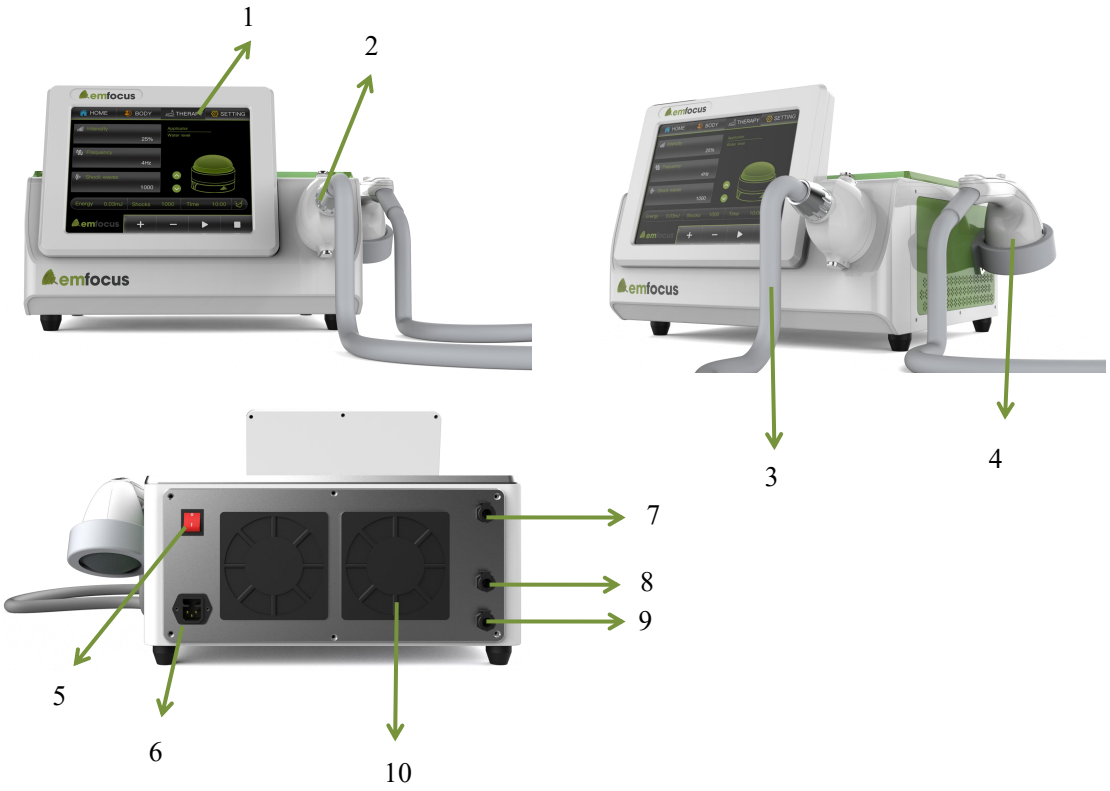
[2] Part List

Machine*1	Shockwave applicator*1	Water Tube*2	Power cord*1

[3] Technical Parameters

Power voltage	≤400 w	Pressure range	5-50 Mpa
Penetration depth	0-65 mm	Voltage	100-110V or 220-240V
Frequency	1-10 Hz	Applicator	1 pcs
Screen size	12.1 inches	Dimensions	45*40*35 cm
Net weight	23 kg	Passwords	888888

[4] Structure of the machine

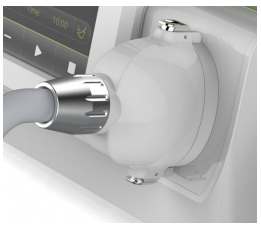


1. Screen 2. Applicator outlet 3.Cable 4. Shockwave applicator 5.Key switch 6. Power outlet
7. Water inlet 8. Overflow 9.Water outlet 10. Cooling fans

[5] Installation

Note: When the machine is power on, we must not install the shock wave applicator and also we can not remove handles from their outlets.

a. The machine has changeable applicators.



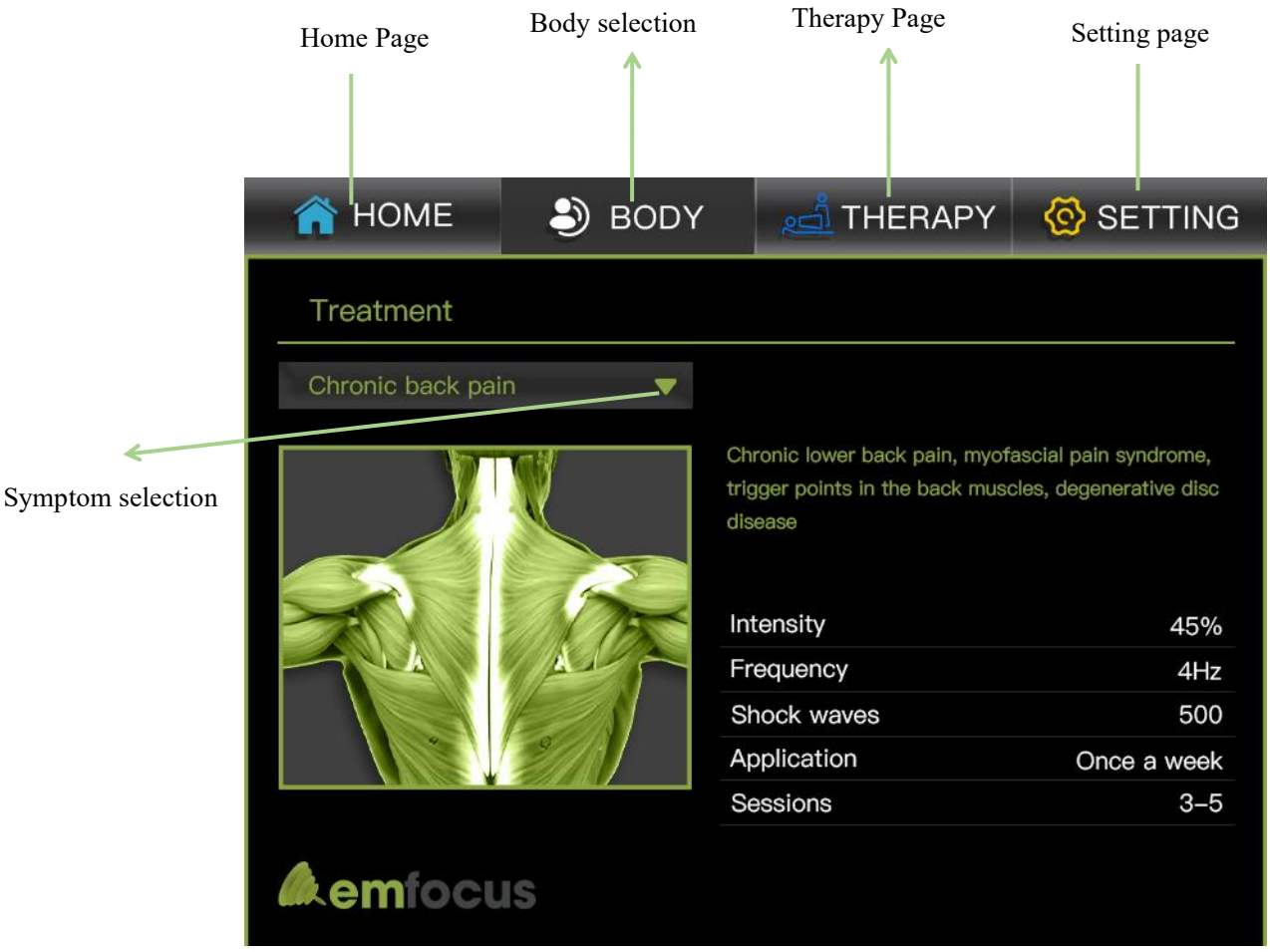
Before starting the machine, the applicator **MUST BE** attached to the device firmly. If there is no applicator attached to the device and we start the machine, the energy has no way to release and will burn the circuit board. This misuse to cause the problem **WILL NOT BE** included into the warranty. Please consult the sales person to get the video guidance about how to install the applicator and change the applicator.

b. Because the machine adopts water system, we need to fill in distilled or purified water into the machine when we receive

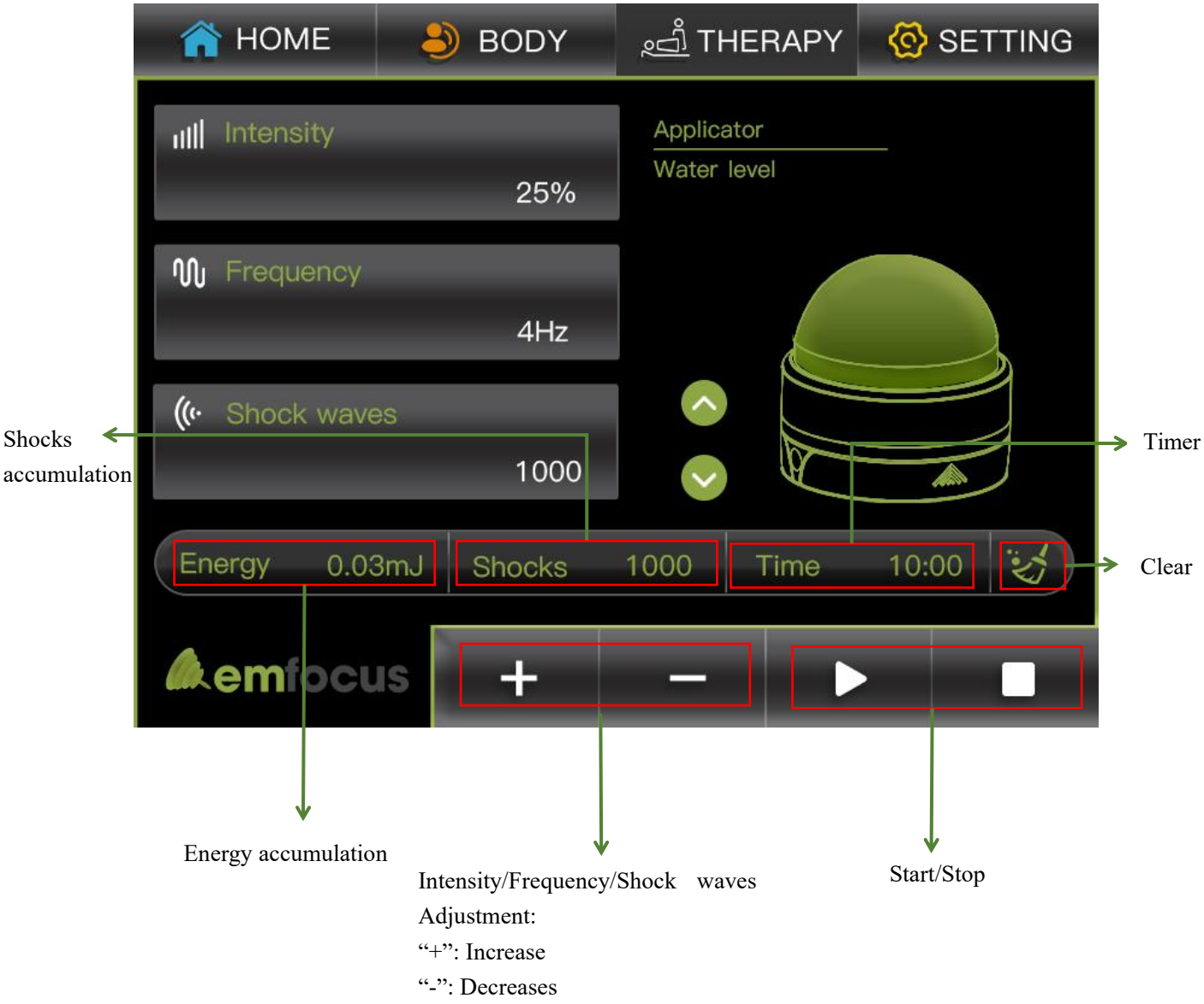
the device. For maintenance, we need to change the water every month. Please consult the sales person to get the video guidance about how to add water and change water.

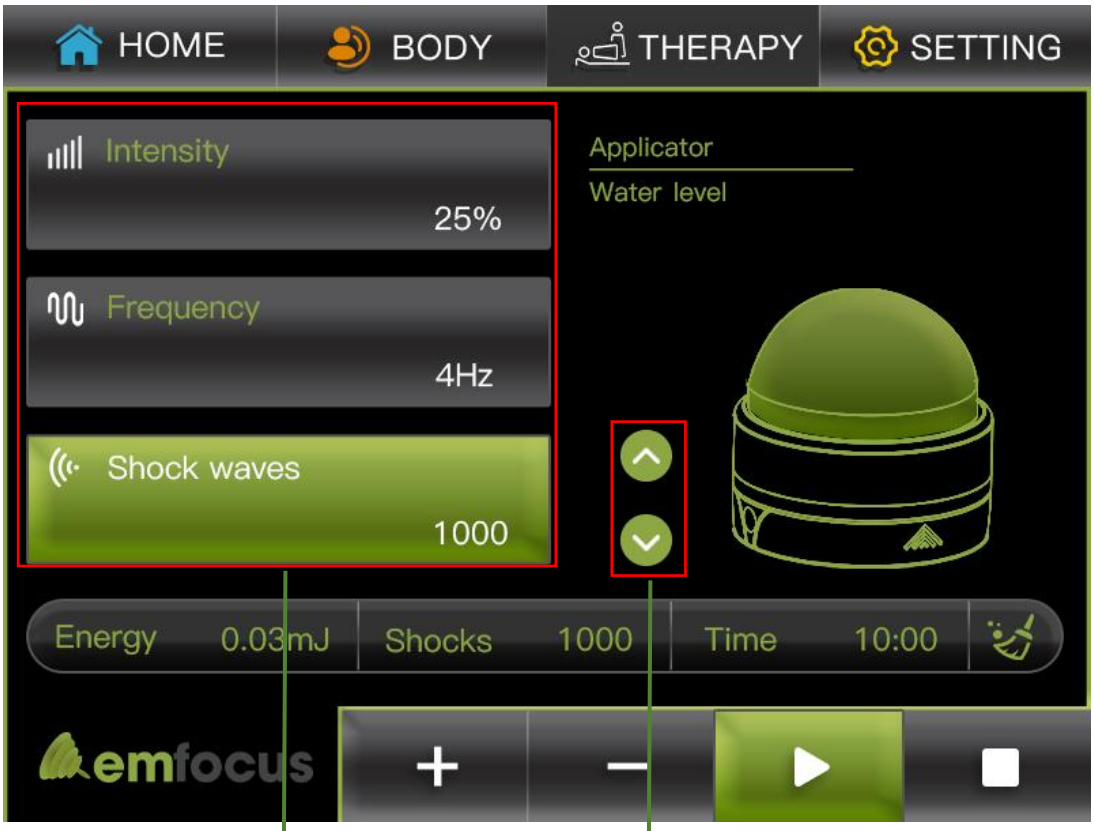
TOUCH SCREEN

[1] Body selection page:



[2] Therapy page:

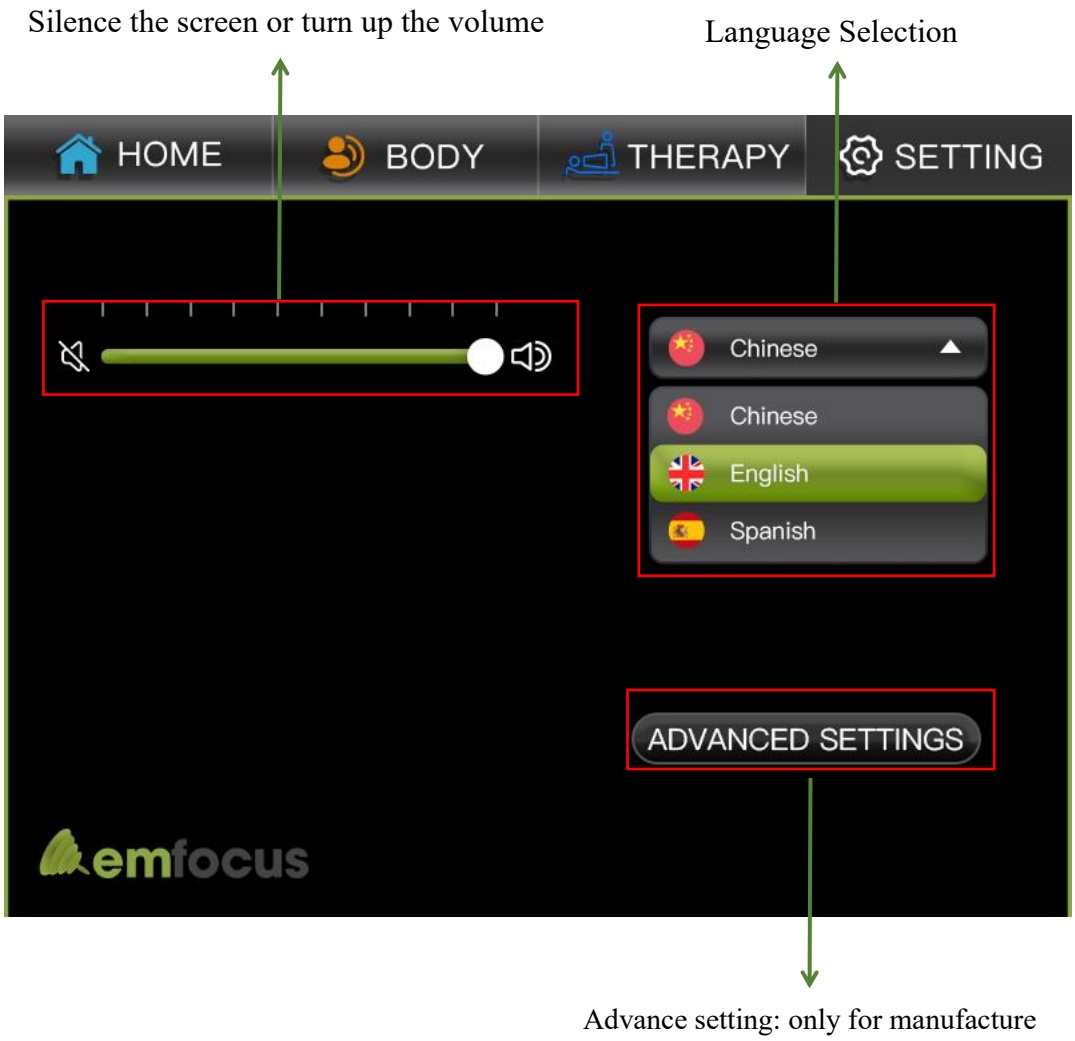




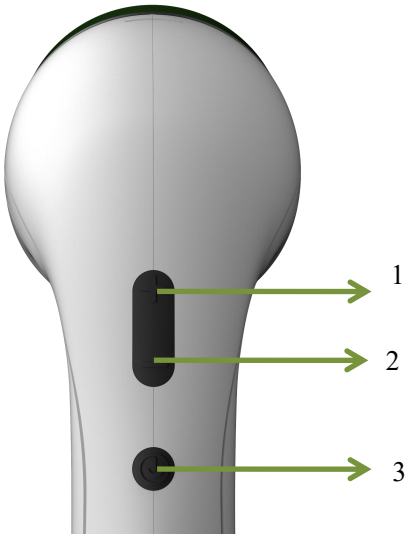
How to adjust the parameters?
Start by selecting the parameter you want to adjust (it will highlight in green), then use the "+" and "-" buttons to make the desired adjustments.

Water Level Control Button

[3] Setting page



[4] Function Button



1. (+) Button
Using the plus button, shock wave intensity can be increased
2. (-) Button
Using the minus button, shock wave intensity can be decreased
3. “Start” button
Using the “start” button to start or stop the treatment

TREATMENT PROTOCOLS

[1] Treatment theory

Release of Growth Factors:

The mechanical stress from FSWT stimulates the release of growth factors such as VEGF (Vascular Endothelial Growth Factor) and BMP (Bone Morphogenetic Proteins). These factors play a crucial role in tissue regeneration, bone healing, and collagen production.

Hyperstimulation Analgesia:

The intense pressure from shockwaves overstimulates pain receptors in the affected area, temporarily blocking the transmission of pain signals to the brain. This results in an immediate reduction in pain perception.

Reduction of Substance P:

FSWT has been shown to reduce levels of substance P, a neuropeptide associated with pain and inflammation, further decreasing pain and promoting a reduction in chronic inflammation.

Anti-Inflammatory Effects:

By modulating the local inflammatory response, FSWT helps to reduce chronic inflammation, which is often a source of ongoing pain and tissue damage.

[2] Long-Term Effects

Tissue Remodeling:

Over time, the cumulative effects of FSWT result in the remodeling of damaged tissues, restoring their structure and function. This includes the reorganization of collagen fibers and the strengthening of tendons and ligaments.

Enhanced Mobility and Function:

The combined effects of pain reduction, tissue repair, and improved blood flow lead to enhanced mobility, function, and overall quality of life for patients.

[3] Indications

a. Tendinopathies

Achilles Tendinopathy, Patellar Tendinopathy, Tennis Elbow

b. Plantar Fasciitis

Heel Pain, plantar fascia

c.Chronic Pain Conditions

Chronic Low Back Pain, Chronic Neck Pain

d.Soft Tissue Injuries

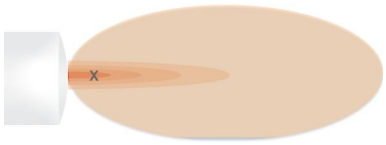
Muscle Strains and Sprains, Ligament Injuries

[4] Recommended treatment protocols

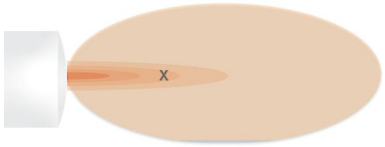
Symptom	Intensity	Frequency	Shock waves	Application	Sessions
Hip pain	50%	3 Hz	500	Once a week	3-5
Jumper`s knee	35%	4 Hz	500	Once a week	3-5
Tibial stress syndrome	40%	4 Hz	500	Once a week	2-5
Plantar Fasciltis	30%	4 Hz	500	Once a week	2-5
Heel squr	25%	4 Hz	500	Once a week	2-5
Chronic back Pain	45%	4 Hz	500	Once a week	3-5
Calcific tendinitis	55%	3 Hz	500	Once a week	3-5
Degenerative joint ankle	35%	4 Hz	500	Once a week	2-5
Wrist Tendonitis	25%	4 Hz	500	Once a week	2-5
Tennis elbow	30%	4 Hz	500	Once a week	2-5
Erectile dysfunction	10%	4 Hz	500	Once a week	3-10

Note: Energy and time can be adjusted according to the type of person and the specificity of the treatment.

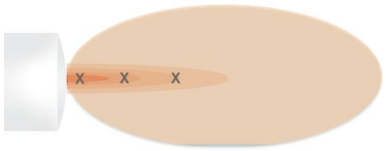
[5] Emfocus utilizes electromagnetic shockwave emitter (EMSE) technology that consists of an electromagnetic coil and a membrane opposite to it. An acoustic pulse is generated by the acceleration of the membrane away from the coil due to eddy currents.



For superficial area of interest: use low energy intensity



For deeper area of interest: increase energy intensity to penetrate deeper into the body



For a wide area of interest: adjust energy intensity to reach more area

Patient's body

[6] Erectile dysfunction treatment

Introduction to Erectile Dysfunction (ED):

Penile erection is a complex phenomenon which implies a delicate and co-ordinated equilibrium among the neurological, vascular and the smooth muscle compartment. Erectile dysfunction (ED) can be conceptualized as an impairment in the arousal phase of the sexual response and is defined as the consistent or recurrent inability to attain and/or maintain penile erection

sufficient for sexual satisfaction, including satisfactory sexual performance. Erectile Dysfunction may affect physical and psychosocial health and may significantly impact the quality of life of sufferers and their partner's.

Risk of ED (European Association of Urology)

Erectile Dysfunction shares both unmodifiable and modifiable common risk factors with CVD (e.g., obesity, diabetes mellitus, dyslipidemia, metabolic syndrome, lack of exercise, and smoking). The association between ED status and age, diabetes mellitus duration, poor glycaemic control, body mass index (BMI) , obstructive sleep apnoea, hyperhomocysteinemia and chronic liver failure associated with hepatitis B has also been confirmed. An association between ED status and vitamin D deficiency has also been reported.

Benefits of ESWT for Erectile Dysfunction

Disease modifying treatment, induces angiogenesis to restore erectile function

• No contraindication for patients on nitrates/ nitroglycerin.

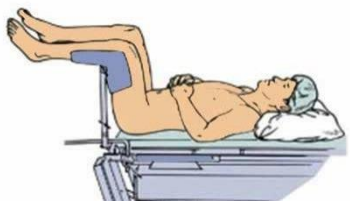
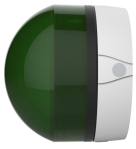
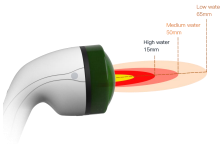
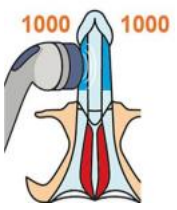
• Non-invasive treatment: in-office procedure with no need for anesthesia.

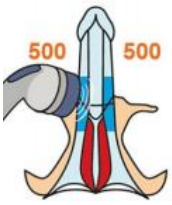
• 6 or 12 total sessions (1, 2 or 3 sessions per week), depending on ED severity.

• Clinical improvement may begin from the 6th session, while further improvement is expected up to 3 months post-treatment.

• Treatment can be successfully repeated after 6 months few side effects.

Emfocus - for - ED Treatment Protocol

<table>
<tr><td>Patient Positioning:
The lithotomy position, or supine frog-leg position, allows for easy access to the penile crura.</td><td>Shockwave Coupling:
Apply ultrasound gel to the applicator and patient. Ensure no bubbles are trapped in the gel</td><td>Intensity:
Use 10% intensity</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td colspan="2">Shaft:
Apply 1000 SW each to left and right corpus cavernosa. Extend the penis,and move the applicators lowly along the shaft to treat the entire length of the shaft.</td><td> 
</td></tr>
</table>

Hilum: 500 SW each to the left and right corpus cavernosa.	
Root: If not in lithotomy position, bend the patient's leg to access the crus. Apply1000 SW each to the left and right crus. Obese patients may require higher energy levels.Misalianment of the applicator onto the pelvic bone will cause pain.	

Immediate Side Effects

It is normal to experience tingling sensations or mild tenderness. If moderate or severe pain is reported, stop treatment immediately. Check that the applicator is not against the pelvic bone.

[7] Recommend Steps

Take “Chronic back pain treatment” as an example:

(1) Enter the password “888888”

(2) Choose the “Chronic back pain treatment” (intensity, frequency and shocks have been preset). We can also change the parameters based on the specific needs. Use the suitable treatment head based on the size of the treatment area.

(3) Apply the gel to the back

(4) Click on “Start” in the interface

(5) Push the treatment head against the back

(6) Press the “start” button on the shockwave applicator

(7) Move the handle slightly

After the preload shocks finish, the handle will stop automatically.

[8] Contraindication

- **Not suitable for certain individuals:** This includes pregnant women, children, and anyone undergoing cancer treatment.
- **Absolute contraindications:** Pregnancy; thrombosis; coagulation disorders (hemophilia); tumor diseases; acute inflammation; presence of pus in the target area.

[9] Maintenance

- After the treatment, clean the gel of the bladder.
- Change the water every 2 weeks