

## EMIMPACTPAE



#### First. Product Introduction

Welcome to choose the latest product of our company, EMIMPACTPOE focused shock wave machine. The core technology of this machine is the integrated piezoelectric shock wave source. The shock wave generated by the piezoelectric shock wave source is focused and acts on the affected area for treatment. Different heights of silicone pad probes can be replaced to achieve multiple penetration depths and directly reach the lesion site, realizing the dual guarantee of treatment depth and accuracy. EMIMPACTPOE focused shock wave is a physical therapy. This therapy is safe, effective, non-invasive, accurately targeted, and has deep penetration. Therefore, it is also known as a "green therapy" and has been widely used as the preferred therapy for treating chronic pain, calcification and tendon damage in the musculoskeletal system. Before use, be sure to read the instruction manual carefully and use it in accordance with the instructions.

### Second. Principle

The principle is that the high-intensity focused shock wave energy generated by the shock wave generator enters specific deep tissues through the skin surface, effectively stimulates the affected tissue and accelerates the growth of new blood vessels and blood circulation, and induces a new inflammatory process, thereby awakening the cell's self-repair function. In addition, the effect of vaporization bubble burst generated by focused shock waves destroys the adhesion, scarring, contracture and blockage of the damaged tendon area, and even the calcified or fibrotic soft tissue, which is commonly known as loosening the injured part of the body, to stimulate the soft tissue to grow again, accelerate blood circulation and promote recovery. At the same time, high-energy shock waves can stimulate pain nerve receptors and block the conduction of pain signals, achieving an immediate analgesic effect.

## Third. Biological effects produced by shock waves on the human body

#### 1. Cavitation effect

When shock waves act on tissues, the gas in the tissues expands and collapses at an extremely fast speed. When the bubbles collapse, there is a high-speed micro-jet phenomenon, accompanied by a rapid expansion of the bubble volume, producing a cavitation effect, causing local microcapillary rupture in the tissue, leakage of blood and cell media, generation of free radicals, and stimulation of new blood vessel formation, dredging occluded microvessels, accelerating microcirculation at the treatment site, improving local blood circulation, and loosening the adhesion of soft tissues.

#### 2. Piezoelectric effect

As a mechanical force, shock waves act on bone tissue, first increasing the stress of bone tissue and generating polarization potential, causing piezoelectric effect. It can accelerate healing, promote the production of collagen, promote metabolism and microcirculation, and the formation of new blood vessels in ligaments, and stimulate the proliferation and differentiation of osteoblasts, thereby promoting bone healing and playing an osteogenic role.

#### 3. Metabolic activation effect

By acting on local diseased tissues, the blood supply at this place is increased, bringing new growth factors, and inducing stem cells to transform into normal tissue structures, reducing the inflammatory reaction and edema at the affected area, and accelerating recovery.

#### 4. Analgesic effect

High-intensity shock waves have extremely strong stimulation on nerve endings, reducing nerve sensitivity and unable to conduct pain signals. Changes in free radicals around cells release substances that suppress pain and increase the pain threshold, thereby relieving pain.

## Fourth. Application fields of EMIMPACTPOE focused shock wave

#### 1. Application in the field of orthopedics:

The EMIMPACTPOE focused shock wave machine has a wide range of applications in the field of orthopedics. It is mainly used in the rehabilitation of fractures and bone cracks after surgery as well as arthritis and ligament injuries. The shock wave treatment method uses the focused shock wave machine to release high-pressure energy and penetrate deep tissues to effectively promote the repair process of bones and joints. For those patients who need to recover quickly, shock waves provide a fast and effective treatment option.

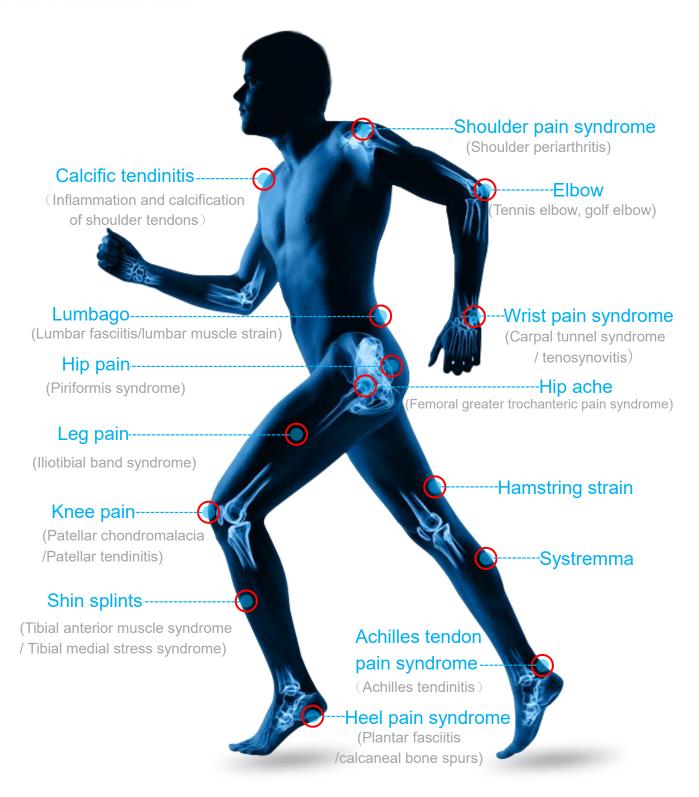
#### 2. Application in sports medicine:

In the field of sports medicine, focused shock wave machines are also widely used in the treatment of sports injuries and the improvement of sports performance. By promoting tissue repair and blood circulation, the focused shock wave machine helps athletes recover faster and at the same time improve the performance level of athletes. Shock wave treatment is especially suitable for athletes who need to return to the sports field quickly, enabling them to deal with injuries and restore the ability to engage in high-intensity activities faster.

#### 3. Application in neurology and rehabilitation medicine:

The focused shock wave machine also plays an important role in the fields of neurology and rehabilitation medicine. For the relief of chronic pain and the rehabilitation of nerve damage, the use of focused shock wave machines has been proven to be an effective treatment method. That is because shock wave treatment regimens can stimulate the patient's body tissues, promote blood circulation, and repair nerve tissues. For patients who need long-term rehabilitation and pain management, shock waves are a comprehensive treatment option.

#### Fifth. Indications



#### Sixth. Product advantages

- 1. Intelligent operation and humanized design: The handle (handpiece) is equipped with a 1.8-inch screen, making it easier to control and adjust on the handle, greatly improving the convenience and efficiency of operation.
- 2. **Variable focusing and fine focus**: With 7 kinds of replaceable silicone pad probes, fine and accurate penetration depth can be achieved. Suitable for pains of different depths and meets more treatment needs.
- 3. Deep penetration and wide coverage: By replacing silicone pad probes of different heights, this equipment can flexibly adjust the penetration depth of shock waves, making the penetration range of its treatment focus more accurate and meeting the treatment needs of different patients. Its strong penetration power enables deep tissues to be effectively treated as well, expanding the treatment range.
- 4. Non-invasive/non-surgical no recovery time: As a non-invasive treatment method, EMIMPACTPOE focused shock wave therapy does not require cutting the skin or injecting drugs, greatly reducing the patient's fear and discomfort and accelerating the rehabilitation process.
- 5. **Safe and effective**: It avoids the risks and complications of traditional surgeries and provides patients with a milder and more efficient recovery path.
- 6. Green therapy: With its safe, non-invasive and highly efficient characteristics, EMIMPACTPOE focused shock wave therapy is known as a "green therapy", in line with modern medical pursuits of low damage and high recovery.
- 7. Comfortable treatment and painless on the body surface: Although piezoelectric shock waves have a relatively high peak pressure value at the focus, their wave source aperture angle is large and the energy density on

- the skin surface is low, reducing the pain on the skin surface and rarely causing tissue pain and discomfort.
- 8. Ultra-quiet and low noise: Whether it is a pneumatic ballistic type or other focused types, the noise generated during operation is relatively large and easily causes discomfort to patients. The piezoelectric focus shock wave adopts the anti-hemispherical surface integration technology and the piezoelectric element assembly to reduce frequency noise and realize a beam focusing device, providing a vibration-free and low-noise treatment environment.
- 9. The treatment time is short. Each treatment session lasts about 10 to 15 minutes, with quick effect and comfort.

#### Seventh. Instrument Maintenane & Maintenance

- 1. The instrument must use a plug with a grounding pin, and ensure that the power socket of the instrument is well grounded.
- 2. The power supply should be consistent with the specified value of the power supply marked on the machine, otherwise the machine may not work, or even burn out the mainboard parts of the machine.
- Make sure that the power supply is stable and suitable. If the local power supply voltage is unstable, it is recommended that the user add a regulated power supply with matching power.
- 4. In order to ensure the therapeutic effect of the instrument and ensure the normal service life, please use the designated accessories provided or recommended by the original manufacturer.

- 5. When using the instrument, do not get close to the wall, and keep a space of 30cm around the instrument for heat dissipation.
- 6. The instrument is a high-precision electronic instrument, please do not place the instrument in a high temperature and humid environment.
- 7. The instrument adopts capacitive touch screen. When clicking, try to touch it with the pulp of your finger, and do not touch it with sharp objects.
- 8. Each accessory is a precision device, so it is necessary to pay attention to maintenance during and after use to avoid shortening its service life.
- 9. Do not use alcohol or corrosive solvents to clean the main unit and handle to avoid damage.
- 10. After each use of accessories, it is recommended to wipe and clean with clean water or normal saline, and then dry with a dry cloth.
- 11. The handle accessories must be handled with care during use, and should not be dropped or bumped by gravity to avoid damage to the handle accessories. The company will not provide warranty for damage to the handle accessories caused by artificial and violent bumps.
- 12. Patients will not be in contact with any metal or other alternate pathway to ground whilst the System is in use.
- 13. Before each use, please check whether the equipment and its accessories (especially the wires) are mechanically damaged or otherwise damaged.
- 14. When the instrument is not in use, please turn off the power, then pull out the power plug, and place various accessories of the instrument. If possible, please cover the instrument with a dust cover.
- 15. It is strictly forbidden to disassemble and modify the equipment without authorization.
- 16. If the equipment fails, it should be stopped immediately, please contact us.

## **Eighth. Warranty Instructions**

Host	One year warranty
Accessories	Three months warranty

#### 1. Warranty period

- (1) The warranty period of the product is calculated from the date of shipment from the factory.
- (2)If any non-human damage or malfunction occurs within the warranty period, repair services will be provided free of charge.
- 2. The following situations are not covered by the warranty:
- (1) Faults caused by unauthorized maintenance, unauthorized disassembly, modification, etc.;
- (2) Damage caused by improper use, accidental falling or violent collision;
- (3) Equipment failure caused by the use of non-original spare parts;
- (4) Damage caused by natural disasters, force majeure, etc.

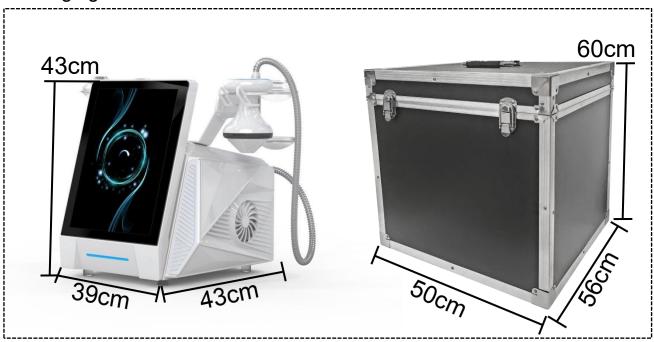
#### Ninth. List of Production

Name	Quantity
Host	1рс
Handle	1рс
silicone pad	7pcs
Hanger	2pcs
Power Cable	1pc

## **Tenth. Technical Specifications**

Product Name	EMIMPACTPOE
Toughened glass capacitive touch screen	15 Inches
penetration depth	4∼66mm
pulse frequency	1~10Hz
strength grade	1~10Bar
Operating Voltage	AC100V~240V,50Hz-60Hz
Power	10-500W
Air box size	50×56×60cm
Gross Weight	26.2kg

### Packaging: Aluminum box



<sup>\*</sup>This specification is subject to change or adjustment without prior notice.

#### **Eleventh. Product Instructions**

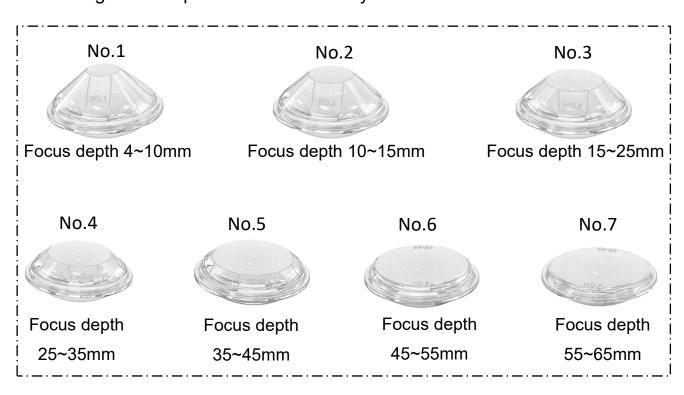
- 1. Installation steps: (1)Install the hanger on the device. (2)Connect the handle to the handle socket on the back of the device, align and insert it and put it into the hanger.
- 2.Insert the power cord into the power cord socket at the rear of the device, turn on the power and turn on the power switch, and the device will start up immediately.





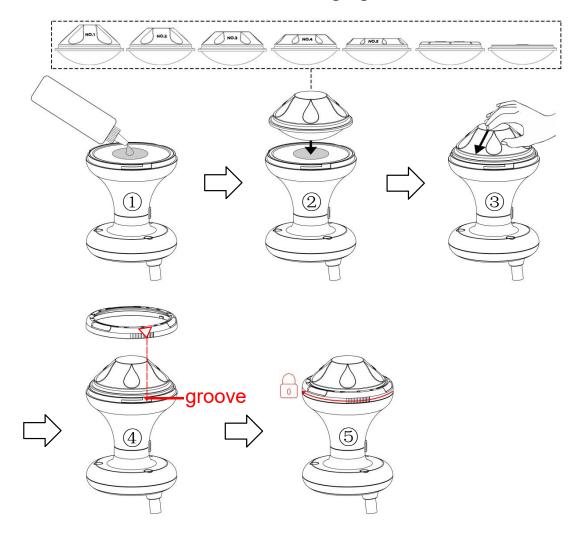
#### 3. Accessory instructions:

- The penetration depth of shock waves can be changed by the distance device "gel pad". Install the distance device "gel pad" to accurately adjust the focusing depth to the target depth.
- The focusing depth of the professional silicone pad is variable. There are 7
  penetration depths ranging from 4mm to 66mm, which can be treated
  according to the depth of the human body.



- Note: If there are obvious changes in the material (discoloration, loss of luster, cracks, bubbles), surface deformation or leakage in the connection area, it should be replaced.
- Regularly check for cracks and other damages on the surface. If there is any surface damage, the gel pad must be replaced.
- To enhance elasticity by producing collagen in the dermis area and have the effect of fat cell membrane rupture, use a gel pad with a shallower depth for treatment.
- Measure fat with a manual fat measuring instrument and install the distance device "gel pad" at about half of the measured thickness.

#### Installation is as shown in the following figure:



- As shown in Figure ① above: add enough gel on the handle.

  Note: Do not use without adding gel, and do not add too little gel. (Error demonstration shown in Figure ⑥ below)
- As shown in Figure ② above: Select the optimal silicone connector based on the required depth of penetration of the focal point.
- As shown in Figure ③ above: Insert the connecting silicone head, gently press it to make close contact with the handle, and gently rotate the connecting silicone head to prevent the formation of bubbles. If bubbles still exist, more contact gel may be added.
- As shown in Figure ④ above: ▼ Align with the groove and install the locking ring cover (fixing ring);
- As shown in Figure ⑤ above: Rotate the lock ring cover clockwise to secure the silicone head.

- As shown in Figure 6 below: Schematic diagram of incorrect installation.

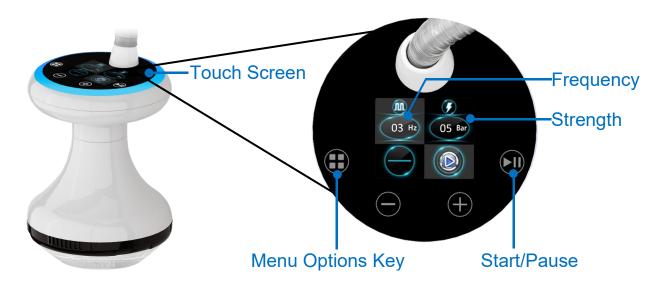


- As shown in Figure 7 below: Schematic diagram of correct installation.



Attention: After installing the silicone head, there should be no air bubbles left underneath. If there are bubbles, gently rotate the connecting silicone head, then install the locking ring cover and rotate clockwise to secure the connecting silicone head.

• Introduction to touch screen buttons on the controller



Menu option key description: Allow users to touch and click the "menu option key to control the frequency and intensity of the two windows to switch back and forth. When the desired window is selected, the number turns blue, and users can click "menu" to adjust the parameters.



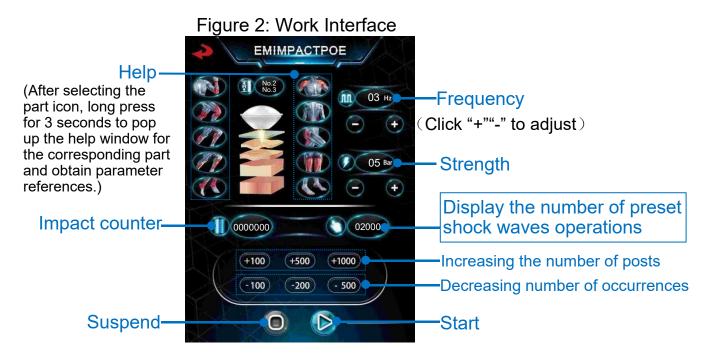
### Twelfth.Introduction to System Interface

1. After booting up, enter the boot interface (Figure 1) and randomly click once to enter the interface shown in Figure 2.



Figure 1: Boot Interface

2. Introduction to the work interface.



#### The introduction of the work button in Figure 2 is as follows:

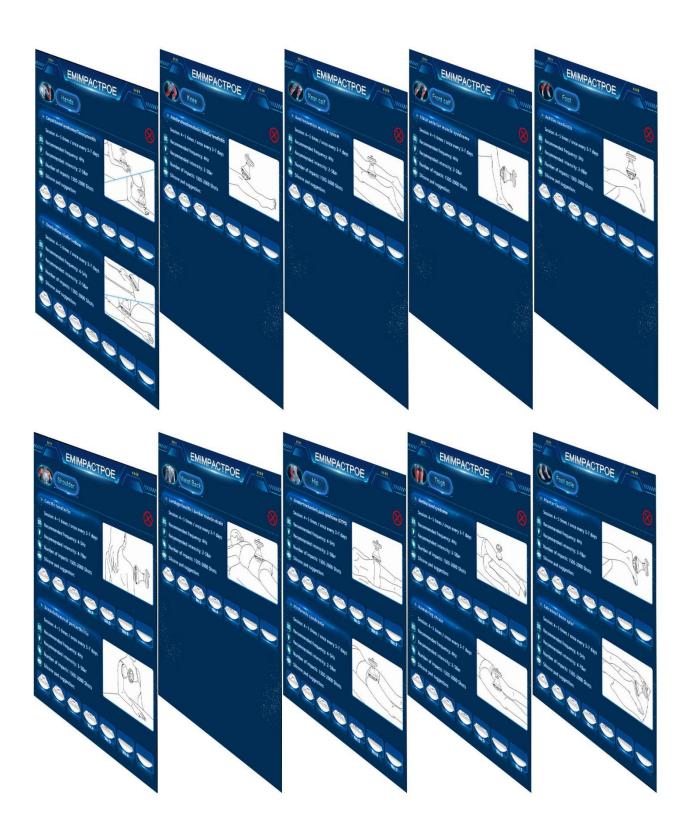
- Click [ ] Indicates returning to the previous interface.
- [ 0000000 ]: Impact counter, record the total number of occurrences.
- 【 02000 】: You can customize the preset number of shockwave strikes, click 【+】 【-】 to adjust by adding or subtracting.
  - This key increments the preset number of shock waves in units of +100 each time.
  - This key increments the preset number of shock waves in units of +500 each time.
  - This key increments the preset number of shock waves in units of +1000 each time.
  - This key decreases in units of -100 each time.
  - This key decreases in units of -200 each time.
  - This key decreases in units of -500 each time.
- 【 111 03 Hz】: Frequency, representing the speed of shock wave output, ranging from 1-10Hz, with increments of 1 per level. Click 【+】 【-】 to adjust by adding or subtracting.

The frequency of treatment depends on individual tolerance and tissue response.

• 【 05 Bar 】: Intensity, range 1-10Bar, increments of 1 per level, click 【+】【-】 to adjust by adding or subtracting.

It is necessary to start treatment at the lowest intensity and gradually increase the treatment intensity according to the user's feelings.

- Clicking on [ ] I to turn it into [ ] I indicates that the device is started and ready, and the controller operation key needs to be pressed to start working and outputting energy.
- Click [ ] turn into [ ] Indicates pause and put the device in standby state.
- 3. In the working interface of Figure 2, taking the hand as an example, the following is introduced: click "to select part Icon", then long press the part icon "for 3 seconds to pop up the corresponding help window for the current part. You can press " "to close the help window.



# Thirteenth.Treatment parameter reference and course setting

1. EMIMPACTPOE - Recommended usage range and parameters are as follows:

Surgical site	silicone pad	Number of impacts	Frequency (Hz)	Intensity (Bar)
Shoulder (Calcium area of aponeurosis)	No.4、No.5、No.6	1500~2000 Shots	4~5Hz	4~7
Scapulohumeral periarthritis	No.4、No.5、No.6	1500~2000 Shots	4Hz	3~5
Elbow (Tennis elbow, Golfer's elbow)	No.2、No.3	1500~2000 Shots	4~5Hz	2~5
Wrist (carpal tunnel syndrome / tenosynovitis/TFCC syndrome)	No.1、No.2	1500~2000 Shots	4Hz	2~5
Thigh (iliotibial band syndrome/hamstring strain)	No.5、No.6、No.7	1500~2000 Shots	4Hz	2~5
Knee (Patellar chondromalacia / Patellar tendinitis)	No.2、No.3	1500~2000 Shots	4Hz	2~5
Front calf (Tibial anterior muscle syndrome /Tibial medial stress syndrome)	No.1、No.2	1500~2000 Shots	4Hz	2~5
Rear calf (Gastrocnemius muscle spasm)	No.3、No.4、No.5	1500~2000 Shots	4Hz	2~5
Foot (Achilles tendinitis)	No.2、No.3	1500~2000 Shots	3Hz	2~6
Foot (Calcaneal bone spur)	No.3、No.4	1500~2000 Shots	4~5Hz	4~7
Foot sole Plantar fasciitis	No.2、No.3、No.4	1500~2000 Shots	4Hz	3~7

Waist Back (Lumbago fasciitis/lumbar muscle strain)	No.3、No.4	1500~2000 Shots	4Hz	2~5
Hips (Greater trochanteric pain syndrome (GTPS)/Piriformis syndrome )	No.5、No.6、No.7	1500~2000 Shots	4~5Hz	2~5
Myofascial pain syndrome	No.3、No.4、No.5	Trigger point 300~500 Shots	7~8Hz	2~5

- Intensity is not determined by body part. Treatment is recommended at an intensity that the patient can tolerate.
- Start with a low-intensity setting of approximately 2-5 and adjust the energy level according to the patient's feedback on the intensity of pain onset.
- If no stimulation is felt, slowly increase the intensity. If the painful area cannot be determined, the penetration depth can also be tested by changing the gel pad.

#### 2. EMIMPACTPOE - Nursing Course:

- Treatment interval: once every 3-7 days.
- Treatment course reference: 4 to 5 times/1 course of treatment.
   (depending on the patient's condition and symptoms)
- The total number of treatments required varies from patient to patient and according to the condition. Most treatment plans are based on 4 to 5 sessions of 1500-2000 shock waves. (depending on the patient's condition and symptoms)
- Varies according to individual conditions and symptom factors. It is recommended that more treatment sessions are more effective. According to an individual's skin condition and needs, the treatment cycle and number of sessions can be adjusted.

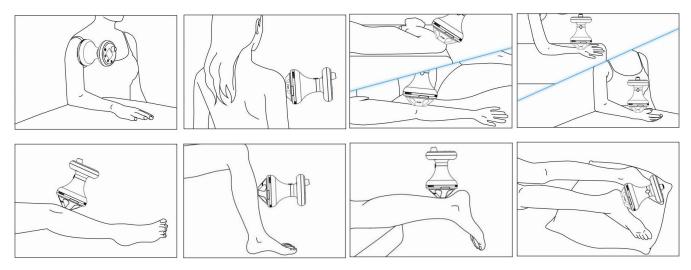
#### Fourteenth. Contraindications

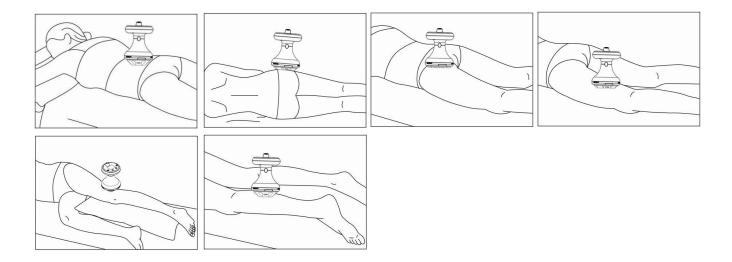
- ▲ Do not treat if any of the following conditions exist:
  - Women should avoid menstruation, pregnancy and lactation.
  - Hemophiliacs or patients receiving anticoagulant therapy.
  - Thromboembolism.
  - Growing children and those with immature bones.
  - Areas with surgical wounds or skin damage, abrasions, open lacerations, acute inflammation or infection at the treatment site are not suitable for treatment.
  - Patients with contact infectious diseases or patients with statutory infectious diseases are prohibited.
  - Those who have received corticosteroid treatment and X-ray treatment in the last 6 weeks should use it with caution.
  - People who have long-term use of steroid hormones and may cause telangiectasia due to liver function disorders.
  - People with severe concurrent diseases such as malignant tumor patients, cancer patients, epilepsy, uncontrolled hypertension, and polyneuropathy should use it with caution.
  - Any unstable medical or psychiatric condition
- ▲ Treatment must not be used on the following areas:
  - Specific tissues: eyes and periocular area, myocardium, spinal cord, gonads (such as ovaries, testicles), kidneys and liver.
  - Areas with gas-containing organs in the body, and internal organs with local air (lungs and intestines). Because shock waves have the characteristic of gasification, when used on the back (lung position), the depth selection must be less than 20mm.
  - Large nerve bundles, large blood vessels, large arteries, areas near the head and neck.
  - Areas of the body with sensory disturbances.
  - Areas with any artificial implants (such as areas with cardiac pacemakers, implanted defibrillators or implanted nerve stimulators).
  - Areas of benign and malignant tissue proliferation.

#### Fifteenth. Treatment steps

- 1. Determine the treatment area by palpation. The treatment area should be marked in advance for precise positioning.
- Body position placement: Select an appropriate body position according to the treatment area to ensure that the patient is comfortable and the treatment area is easily exposed.
- 3. Before operation, replace the silicone pad probe to be operated, preset the parameters, and click " to start and activate the device.
- 4. Apply an appropriate amount of gel coupling agent to the treatment area. The use of coupling agent can efficiently and stably apply sound waves. Operation without medium is prohibited.
- 5. When ready, place the shock wave silicone pad probe close to the treatment point, and then press the operation control key on the handle to start treatment.
- 6. Search for trigger points by moving the treatment source very slowly and slightly changing the application angle.

#### 7. Illustration of examples:





- 8. Conduct treatment according to preset parameters. During the treatment process, pay attention to observing the patient's reaction and adjust the treatment intensity or suspend treatment in time.
  - If the intensity is too high, it can be adjusted in two ways. The first way is to lower the intensity (reduce), and the second way is to increase the frequency (increase the speed). The faster the speed, the lower the impact force.
- 9. After the treatment is completed and the set number of treatments is over, wipe and remove the residual gel coupling agent and assist the patient to return to the original position.
- 10. After the treatment is over, turn off the equipment, open the handle fixing ring and take out the silicone pad, and wipe and remove the gel between the silicone pad and the handle.

