



SM-CRY03

**Cryotherapy Device**



## Product Introduction

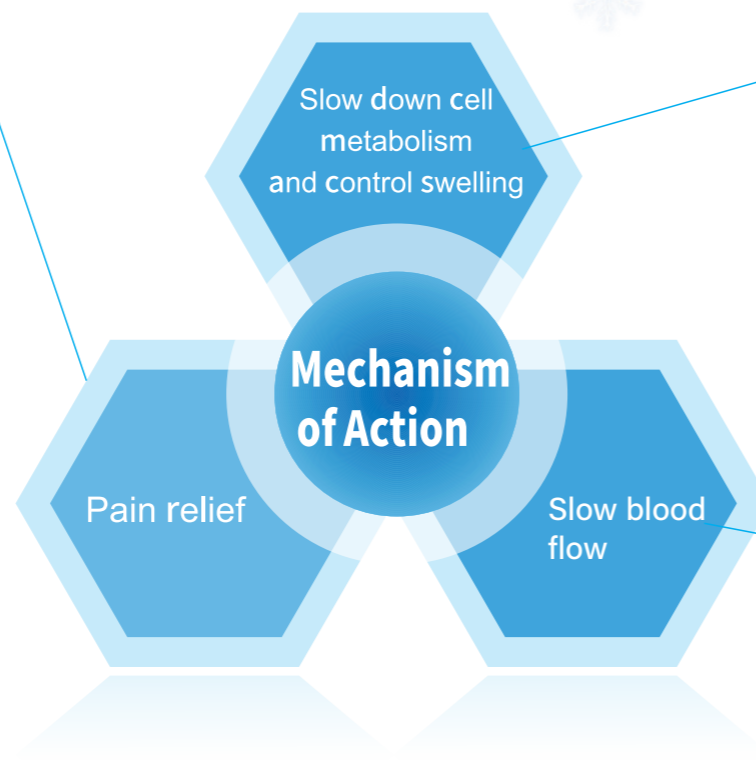
Cryotherapy Device generates low temperature shock force through the compressor, non-contact, non-invasive spray to the treatment site, the temperature of the skin is rapidly reduced, used to control inflammation, pain, and edema; reduce spasm; affect hemodynamics, neuromuscular and metabolic effects. The specially developed infrared temperature control device can detect the temperature of the skin surface in the treatment area at any time, and automatically control the low temperature impact flow, so that the temperature of the treatment area quickly drops to the set temperature.

## Therapeutic Advantage

	Traditional Cryotherapy	Modern Cryotherapy
<b>Treatment Method</b>	Ice packs, wet compresses, soaking baths, cold sprays, cold wraps, etc.	Cryotherapy Device
<b>Treatment Mode</b>	Conductive, direct contact with skin.	Transitive, non-skin contact.
<b>Temperature</b>	The temperature is not constant, and the curative effect is difficult to guarantee.	Temperature is controllable and can be set, the treatment temperature is more accurate.
<b>Time</b>	Uncontrollable and highly subjective.	Treatment time can be set.
<b>Safety</b>	It's contact-type and there is a possibility of infection; It also exist a possibility of frostbite.	Non-contact, prevent cross infection; skin detection function, prevent frostbite.
<b>Use</b>	Need to be sterilized, cumbersome.	Smart settings, easy operation.

### Pain relief mechanism can be divided into three aspects:

- ① Low temperature shock acts on the body, reducing the local temperature, making the response output of sensory nerves slow down, reducing the speed of nerve impulse conduction, so as to reduce the feeling of pain;
- ② Low temperature shock promotes vasoconstriction, reduces tissue bleeding, and reduces swelling, thereby reducing the pain caused by swelling;
- ③ The feeling of cold is transmitted faster than the feeling of pain, which increases the threshold of pain sensation, and reduces the sensation of pain.



### Slow down cell metabolism and control swelling

When cells are subjected to low temperature shock, oxygen demand is significantly reduced, thus slowing the metabolic rate of the injured tissue and reducing the need for oxygen and other nutrients of the injured tissue. When the temperature is lowered by about 10°C, the activity of metabolic enzymes is reduced by about 50%. Therefore, lowering the tissue temperature can reduce the metabolic rate to avoid secondary damage to other uninjured tissues. Low temperature shock reduces blood flow, reduces vascular permeability, and reduces local inflammatory exudate, thereby controlling tissue swelling and inflammatory responses following injury.

### Lower temperature, slow blood flow

The reduction of tissue temperature caused by low temperature shock, the body produces a physiological response to cold stimulation, which promotes local vas constriction, slows blood flow, reduces capillary permeability, reduces tissue fluid extravasation, slows local metabolism, and reduces oxygen consumption. Reduced muscle tone is beneficial for early postoperative swelling and reduced bleeding.

## SM-CRY03



Fast  
Cooling

Real-time  
Display  
Skin  
Temperature

Multiple  
Protocols

Three  
Languages

Automatic  
Defrost

### Product Performance

- Super large air volume
- Safety measures
- Defrost function
- Ultra-low temperature stable output
- 40 custom protocols
- Large touch screen, easy to operate

### Treatment Operation



Shoulder



Knee



Ankle



Wrist

Suitable for adjuvant treatment and relief of swelling and pain caused by acute soft tissue injury



## Clinical Research

"The short-term treatment of cold air at  $-20^{\circ}\text{C}$  can inhibit the infiltration of leukocytes and inhibit tissue swelling without causing tissue damage. The analgesic and swelling inhibition effects of cold air are more obvious after 1-3 hours treatment, which is the clinical use. Several treatments per day provide experimental evidence."

—An animal experiment on the anti-inflammatory and analgesic effects of a cold air device **Modern Rehabilitation**

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"Using cold air therapy, cold stimulation can constrict peripheral blood vessels, reduce local exudation, inhibit edema and inflammation, and can slow down nerve conduction and reduce sensory sensitivity to achieve the purpose of pain relief."

—A cold air therapy for the treatment of stenosing tenosynovitis **New Medicine**

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"The cold air therapy device has exact and fast curative effect on acute soft tissue injury, and is easy to operate. Compared with other cryotherapy, it has incomparable advantages."

—Observation on the curative effect of random grouping of cold air device in the treatment of acute soft tissue injury **Chinese Clinical Rehabilitation**



## Application



Orthopedics  
Department



Sports Medicine  
Department



Pain Department



Rehabilitation  
Department



Dermatology  
Department



Burn Department