

# The Science

## THERAPEUTIC EFFECTS

### Temperature

The ECB spa solution is chilled to 2°C which takes out heat and inflammation. The solution, at this temperature, provides analgesic pain management and inhibits enzyme degeneration of tendons post injury.

### Salt Concentration

The ECB salt solution acts as a hypertonic poultice, reducing heat while having a natural healing effect on wounds. Water density increases with salt concentration, which in turn increases pressure to aid fluid and waste dispersal.

### Aeration

Water aeration has a massaging effect on the leg and increases the dissolved oxygen content of the spa solution.

### Depth

The depth of the water is proportionate to the pressure exerted on the leg which aids fluid and waste dispersal. Water depth is adjustable dependent upon the position and severity of injury.

### Biological Control

Proper chemical and salt maintenance allows for thousands of successive treatments without water replacement. Temperature and chemical levels combine to eliminate the transfer of microbiological infection.

### Dissolved Oxygen

As water temperature decreases, its ability to carry oxygen increases. Increased oxygenation through the introduction of aeration is believed to enhance natural defence systems, much like the use of a hyperbaric chamber for humans.

## PREVENTION IS BETTER THAN CURE

Regular use of cold salt hydrotherapy immediately after exercise will remove many of the stressors within tissues before inflammation develops. Cold also significantly improves surface bone density, reducing the opportunity for bone stress related injuries to occur.

*For more detailed information please see our case studies on the ECB Equine website.*

# What it treats

Cold salt hydrotherapy can be used to treat all forms of lower leg inflammation... removing the painful fluid and swelling associated with injury. More specifically, these conditions are detailed below.

- Tendonitis
- Desmitis
- Arthritis
- Hoof injuries
- Sore shins
- Shin splints
- Jar up
- Bursitis/Synovitis
- Open wounds and skin infections



Chris Pollitt

### Laminitis

Chris Pollitt, a practising veterinary surgeon, created the Australian Equine Laminitis Research Unit in 1996. The unit has become an international focus of laminitis and equine foot biology research. In 2008 Dr Pollitt published a paper on the success of cryotherapy in treating laminitis - the results were conclusive and proved that cold water therapy effectively ameliorates the clinical signs and pathology for acute laminitis.

