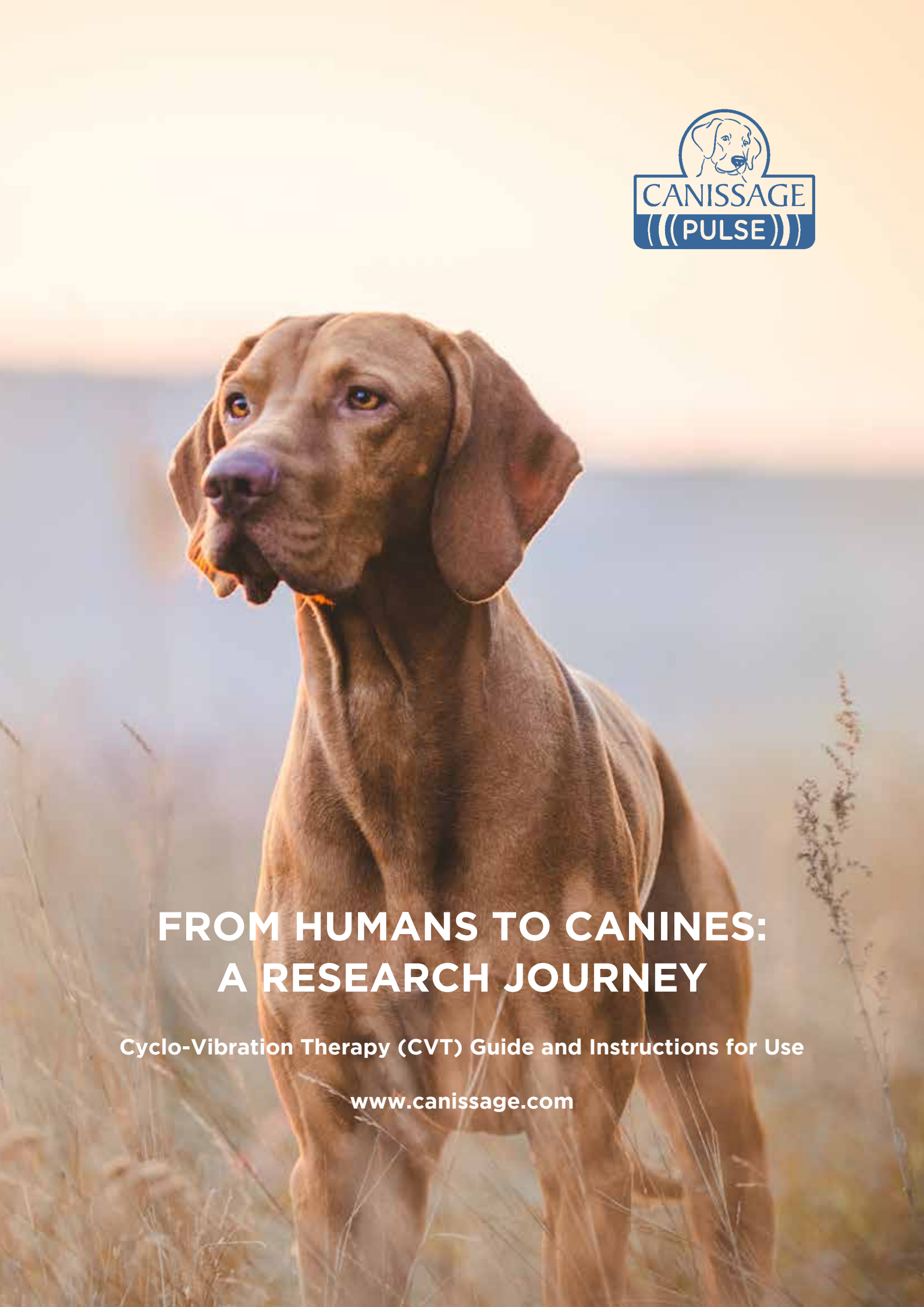


FROM HUMANS TO CANINES: A RESEARCH JOURNEY

Cyclo-Vibration Therapy (CVT) Guide and Instructions for Use

www.canissage.com

Congratulations

Welcome to your new Canissage.

Improving the health, wellbeing and performance of your dogs with the new Canissage, is now easier and more enjoyable than ever before.

Canissage prides itself on delivering exceptional therapy systems that enable dog owners, therapists and competitors, across all disciplines a powerful tool to ensure their dogs are always at their peak.

If it is for improving performance for competition, maintaining optimal or good health or helping rehabilitation a Canissage will deliver these and much more.

The Team at Canissage, want your experience to be easy, which is why we have created this owner's manual to assist you with everything there is to know about using your therapy product.

Your dog's circulation system holds a key to its health, well-being and over all condition. Along with this, efficient circulation and tissue relaxation can help in healing injuries and ensuring muscle and connective tissues are able to function properly.

People, patients hospitals, clinician's, athletes, animals and vets have used the proven benefits of the Cycloidal-Vibration Therapy (CVT) found in Canissage.

We are confident that you and your dog will benefit using from daily use of your new Canissage. When used correctly and regularly the therapeutic results will impress and the very best in research proven therapy is a simple press of a button.

Best Regards

Team Canissage

Why Canissage Pulse

- ✓ Canissage Pulse Digital belongs to a UK-owned company (established in 1965) that has dedicated decades into developing the very best quality Cycloidal-Vibration Therapy (CVT) devices possible.
- ✓ Canissage Pulse Digital is an evolution in the ongoing development of Cycloidal-Vibration Therapy (CVT) delivery systems incorporating advances in technology and design.
- ✓ All Canissage devices are made in the UK within a purpose-built facility producing Class IIa regulated Medical Devices for human therapy applications.
- ✓ People and animals use our Cycloidal-Vibration Therapy products every day throughout Europe, America, Asia, New Zealand & Australia.
- ✓ Dog owners, competitors and therapists use Canissage Pulse across every discipline.
- ✓ Clinical Studies have shown that Cycloidal-Vibration Therapy (CVT) products improve blood flow, relieves muscle/joint pain, assists with healing and improves joint mobility.

CANISSAGE PULSE

Improves blood circulation

Stimulates soft tissue

Improves joint mobility

Removes harmful toxins

Muscle relaxation

Increase stride

Designed, Developed, Researched and Manufactured in the UK.

Canissage Pulse products have been design and developed and manufactured at our dedicated production site in Denbighshire, North Wales. Our site production is regulated to medical device production standards ISO 9001 & ISO 13485 & CE 642142.

MADE IN BRITAIN

OUR CONTRIBUTION: Canissage Pulse is part of Niagara Healthcare company group and we are passionate about helping those in need, especially those most vulnerable; children or those with disability. Our Crown Pin Foundation's aim of raising money to benefit their lives throughout the UK. Managed by a committed group of employees, the foundation raises funds and donates our equipment throughout the year, through various employee activities. 100% of the money raised goes to product and cash donations to worthy cases.

Crown Pin Foundation

Last year we donated **over £20,000** to children's charities.

Who uses Niagara Cycloidal-Vibration Therapy (CVT) as per Canissage Pulse?

A small selection of organisations and users over the years in both Human and Equine applications:

- NHS Spinal Injury Centres in the UK
- NHS specialist wound clinics
- Private and NHS occupational health Centres
- Private and NHS Physiotherapy Centres
- Team Flyz Flyball Team UK
- Australian Institute of Sport (AIS)
- Australian Cricket Team
- Olympic & Paralympic Athletes
- UK Athletics Team
- Double Dan Horsemanship
- Megan Jones Eventing Team
- John Wicks Training Stables
- Willie Mullins Training Stables
- James Fanshawe Stables
- Michael Jung – World and Olympic gold medal winner Equestrian
- Stephen Gray Racing (Singapore)
- George And Michaela Whitaker

The Cycloidal-Vibration Therapy (CVT) Difference

The Canissage Pulse is one of the safest forms of equine therapy available. Through ongoing research conducted in hospitals, universities, and research institutions, this form of treatment has been shown to be highly effective while being non- aggressive, drug-free and free of side effects.

Canissage products have been developed in the UK and Australia from the Niagara Therapy product range, which have been used on humans for both injuries and mobility healthcare. This equipment is used at home, in hospitals, clinics and sport clubs.

Our CVT products have proven medical benefits include Increased Circulation and Lymphatic Drainage, Relaxation of Muscles and Increased Joint Mobility; which result in:

- **Improved movement and performance;**
- **Faster recovery & rehabilitation;**
- **Achieve peak condition for both you and your horse.**

As a result our human therapy products are classified and registered as medical devices and are regulated to ensure performance, efficacy and safety to European standards.

CE As well as being registered with BSI, meeting EU directives and holding the CE mark for Class IIa medical device classification, we also adhere to strict ISO Standards.

The Canissage Pulse system includes a digitally controlled Pad with over 20 therapy settings that delivers a deep-tissue CVT Massage to the entire dog.

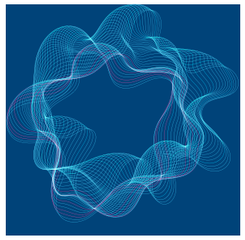
Due to the unique action of CVT, it actively Improves Circulation, Relaxes Muscles while providing Passive stimulation to soft tissues.

George and Michaela Whitaker – “People may think the Equissage is just designed to ‘give a massage’.. but it’s not! We find it really supports producing the overall appearance that we strive for with each and every horse, whether it’s those that show or showjump. We would be lost without our Equissage. It’s most definitely a piece of equipment we use on every horse, everyday!”

What is Cycloidal Vibration Therapy (CVT)?

CVT is a unique three-dimensional vibration generated by a sinusoidal electromechanical oscillator.

CVT is incorporated into various unique products manufactured in the UK by our company. These may be easily used at home by an individual or by a medical or physical therapy professional in the home or clinic setting.



This illustration shows the three dimensional circular movement created by cycloidal vibration.

This illustration shows the three dimensional circular wave transverse movement. (A transverse wave is a moving wave that consists of oscillations occurring perpendicular, or at right angles to the direction of energy transfer.)

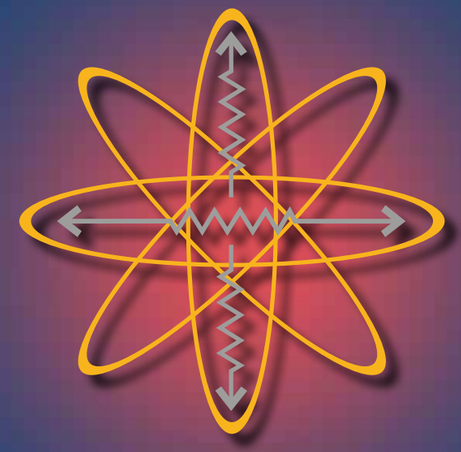
IMPORTANT TO NOTE: to make medical claims for human application a product has to be audited and meet specific European medical device quality standards. This assessment ensures quality, safety and proof of effectiveness. All human CVT products are registered as medical devices as such they are CE marked and are audited to standards regulated by the UK medicines and healthcare regulatory authority.

Why is Cycloidal Vibration Therapy (CVT) Different?

Initially there is no obvious difference between the feel of conventional vibration and the Cycloidal Vibration Therapy (CVT) in our products.

However, conventional vibration can produce an aggressive slapping or pounding at a high amplitude in a single direction of motion and at a high frequency. CVT acceleration rate is very low compared to other vibration techniques which can be up to 50 x higher. This often produces an uncomfortable sensation that may be damaging to muscle and soft tissue.

A CVT unit has a very special suspension system, which is the reason it generates a three-dimensional motion like a cyclone “cycloidal vibration” in a circular rising and falling motion. This causes the energy to penetrate both gently and deeply into the body.



At the University of Brussels Medical Department, research by Professor P. Lievens demonstrated that CVT energy effectively penetrates the human body and that:

- **CVT acceleration rate is very low – approximately twenty eight meters per second squared.**
- **Other techniques of vibration can produce around one thousand two hundred and ninety meters per second squared. That is about 50 x greater than a CVT generator**
- **This is what sets CVT apart …. It is a Non- Aggressive technique**

VUB VRIJE UNIVERSITEIT BRUSSEL

NHC Cyclo-Therapy®: FROM HUMANS TO HORSES A RESEARCH JOURNEY

The principles Cycloidal Vibration Therapy (CVT) has been researched and tested on many human medical studies on both healthy participants and those with both acute and chronic healthcare conditions. Although not directly similar physiological and cellular responses in the human body are also reflected in the animal body as well such as the canine. Although it is accepted that significant specific research in the canine model is limited.

These include principles upon how:

- Muscle relaxation – how a process called tonic vibration reflex can regulate and change muscle tone and tension to enable relaxation.
- Fascia release (connective tissues) – how a process of CVT combined with motion can aid the release and movement of fascia post injury or healing to enable fascia flexibility and joint motion.
- Circulation – how a process called nitric oxide synthase regulates changes in blood flow and circulation. Changes in circulation that can improve health, aid tissue repair and healing.
- Circulation – regulates changes in lymphatic flow that can affect fluid and toxin removal in swelling and healing.
- Pain Relief – how a process called the Pain Gate Theory, whereby as a sensory stimulant it stimulates parts of the nervous system that regulates the feeling of pain and generates pain relief.
- Post and pre-exercise muscle soreness and pain prevention – how the combination of stimulation of both the muscle tonic vibration reflex, the pain gate, and increase in circulation to reduce toxins can help with delayed onset of muscle soreness DOMS.

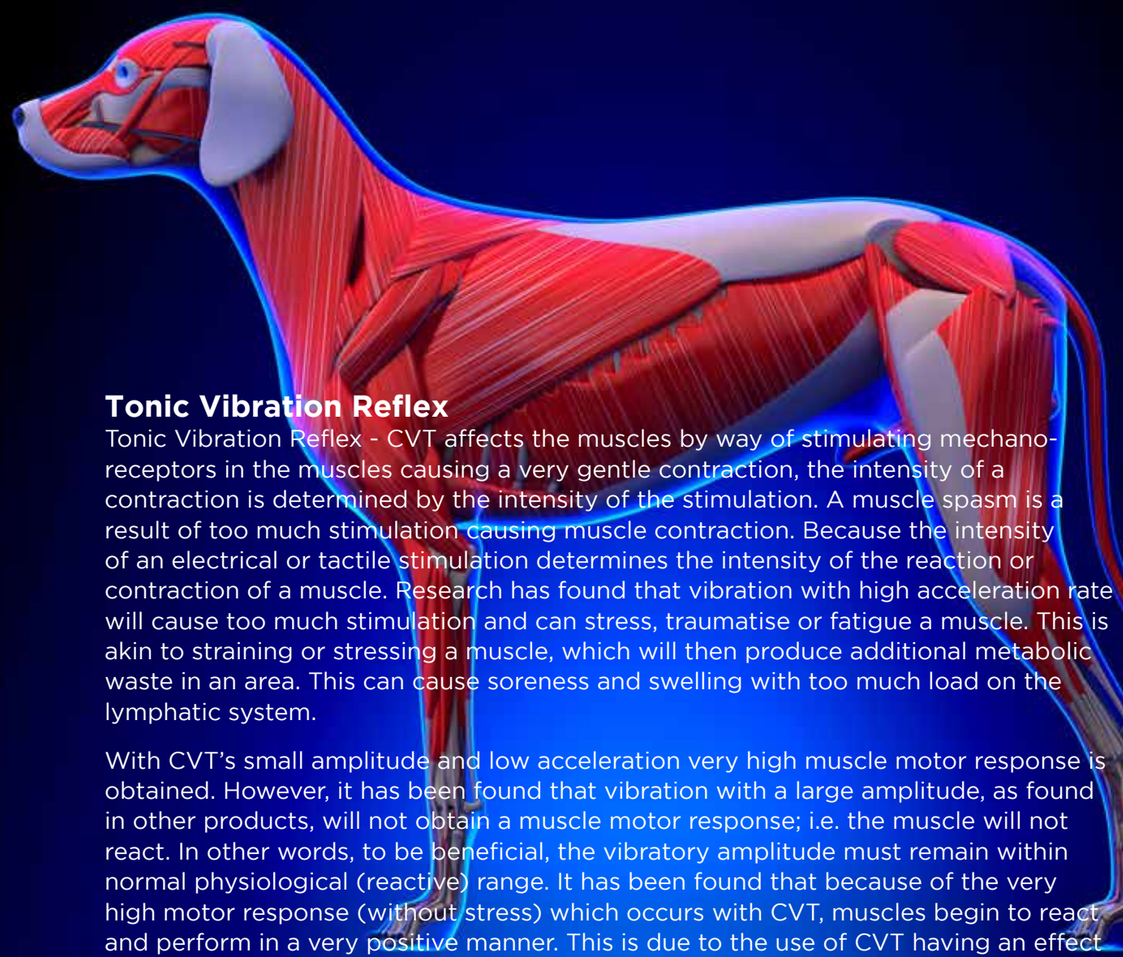
How We Can Help

- Increase tissue health and performance
- Arthritic joints
- Lymphatic circulation
- Swollen joints
- Respiratory disease / problems
- Wound and soft tissue healing.
- Improve Joint and Muscle Flexibility
- Relieve Stress
- Relax muscles
- Local blood circulation
- Venous drainage
- Increasing Range of Motion
- Increase Stretch
- Aid Rehabilitation
- Tight hamstrings
- Sore backs
- Lactic Acid
- Fibrinogen vertebrae problems
- Ligament and tendon damage
- Post-race exercise stiffness
- Pulled ligaments

"Since using Canissage Pulse we have a seen a massive difference in our older agility dogs mobility aswell as our younger dogs performance in the ring. They are all much happier and focused" April, Agility Trainer

Note Disclaimer - we should emphasise that Niagara Equissage products are are not a cure for these conditions but they can do much to help alleviate the symptoms associated with them and aid health conditioning. They are designed to complement the range of current therapies available from your vet and their use can always be discussed with a veterinary professional if you are concerned. You should not discontinue any current therapy without first seeking advice.

Cycloidal Vibration Therapy (CVT): relaxing muscles



Tonic Vibration Reflex

Tonic Vibration Reflex - CVT affects the muscles by way of stimulating mechano-receptors in the muscles causing a very gentle contraction, the intensity of a contraction is determined by the intensity of the stimulation. A muscle spasm is a result of too much stimulation causing muscle contraction. Because the intensity of an electrical or tactile stimulation determines the intensity of the reaction or contraction of a muscle. Research has found that vibration with high acceleration rate will cause too much stimulation and can stress, traumatise or fatigue a muscle. This is akin to straining or stressing a muscle, which will then produce additional metabolic waste in an area. This can cause soreness and swelling with too much load on the lymphatic system.

With CVT's small amplitude and low acceleration very high muscle motor response is obtained. However, it has been found that vibration with a large amplitude, as found in other products, will not obtain a muscle motor response; i.e. the muscle will not react. In other words, to be beneficial, the vibratory amplitude must remain within normal physiological (reactive) range. It has been found that because of the very high motor response (without stress) which occurs with CVT, muscles begin to react and perform in a very positive manner. This is due to the use of CVT having an effect on the muscle's electrical sensitivity; i.e. after using CVT on a muscle, the muscle will react with less electrical input required. In scientific studies, the conclusion reached was that on human subjects, the rheobase (the lowest possible electrical impulse necessary to cause a muscle reaction) was reduced by 20% after just fifteen minutes of cycloidal vibration application. The benefits of this are of great importance for sports medicine and muscle toning, allowing greater mobility, especially with continued usage.

Ref: Guang H et al Focal Vibration Stretches Muscle Fibers by Producing Muscle Waves.. IEEE Trans Neural Syst Rehabil Eng. 2018 Apr;26(4):839-846.

"Fantastic product great for dogs with nervous disposition and ideal for relaxing them whilst they receive physiotherapy. My clients and their dogs love it, and I could not be without mine, it's a definite must have in my opinion!"

Tracey Jones – Fusion Vet Physio

Used by Professionals on human patients and athletes

"At the West Yorkshire Physiotherapy Centre we work with a wide variety of musclo-skeletal conditions, from post-operative orthopaedic problems to professional athletes sporting injuries. We are actively using CVT in the treatment of connective tissues within our range of professional massage techniques. This promotes increased blood flow, reduction in swelling, decreased pain perception and as a result increased joint mobility and function."
Janine Midgley. MCSP,HCPC,Grad Dip Phys, Dip App Sports.

Commenting on the use of CVT, Katie Ormerod: World cup winner Olympic snowboarder said: "As a freestyle snowboarder I have to have the flexibility and control of a gymnast to undertake aerial tricks. A fall on the snow can cause lots of soft tissue injury. CVT is really helping me to recover quicker after a hard session of training or injury. I am using the therapy pre-and post-training sessions and competition"

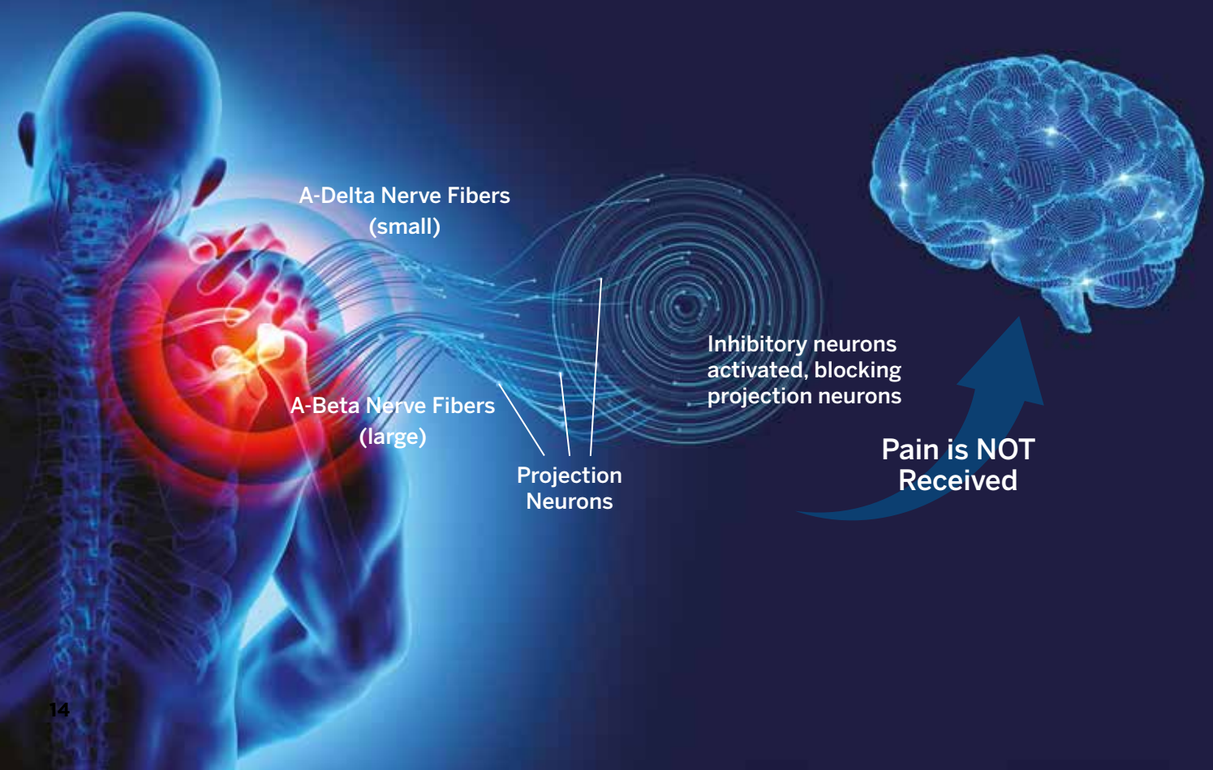
World Champion and Olympic Gold Medalist – Michael Jung – "I use CVT therapy to travel with it really helps to keep the horses muscles nice a loose before and after competition"

Cycloidal Vibration Therapy (CVT) - reducing Pain Helping Canine Arthritis

When applied, directly to or surrounding an area of pain, NHC Cyclo-Therapy® is a non pharmacological aid to both generate pain relief or increase pain threshold.

The cycloidal vibration generates an anaesthetic effect to reduce pain. HOW? It is a sensory stimulant for parts of the nervous system that regulate the feeling of pain.

It stimulates through the skin and into the body the fast-conducting large diameter myelinated A-Belta fibres nervous system. These in turn block the slower conducting nervous system that carry the pain signals. As a result this then triggers (inhibitory interneurons) these control pain transmission resulting in pain relief or an analgesic effect and potentially raised pain threshold.



NHC Cyclo-Therapy®: Relaxing Muscles for Patients Receiving NHS Care in the UK

We use the CVT hand unit with stroke patients that suffer with increased tone and muscle spasticity (muscle stiffness). We have tried other sensory vibration products before with little effect. The CVT hand unit really helps to free up the muscles in these patients to improve joint proprioception and improved flexion and extension after only 5 minutes use. The treatment has given enormous physical, functional and mental gains to stroke patients. Kelly Aelberry, Physiotherapist, Hospital Stroke Team

Human Research

“Vibration therapy reduces chronic pain” Research Published in the ‘European Journal of Pain’.

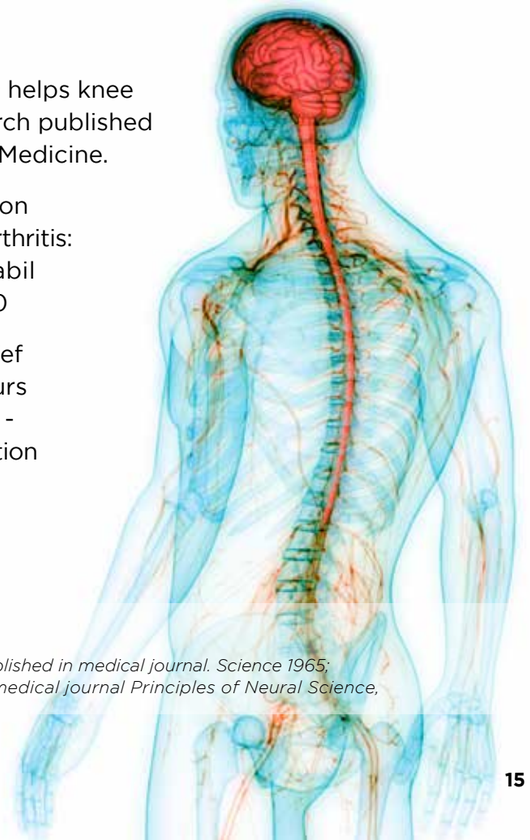
Vibration can help to ease certain types of pain by more than 40 percent. Scientists at the University of Florida College of Medicine found that vibration produces an “analgesic effect”, according to Dr Roland Staud, a professor of rheumatology and clinical immunology at the institute. Reference - Roland Staud et al. “Attenuation of experimental pain by vibro-tactile stimulation in patients with chronic local or widespread musculoskeletal pain.” European Journal of Pain. February 2011.

Helping Pain and Joint movement

Scientist research shows that: “Muscle vibration helps knee movement in people with osteoarthritis” Research published European Journal of Physical and Rehbilitation Medicine.

Rabini A et al. Effects of focal muscle vibration on physical functioning in patients with knee osteoarthritis: a randomized controlled trial. Eur J Phys Rehabil Med. 2015 Oct;51(5):513-20. Epub 2015 May 20

“Vibration therapy for 20 minutes produced relief of chronic muscle pain that lasted at least 3 hours but in many cases 12 hours or more.” Reference - Lundeberg T, Vibratory stimulation for the alleviation of chronic pain. Acta Physiol Scand Suppl. 1983; 523:1-51.



Reference: Melzack R, Wall PD, Pain mechanism a new theory. Published in medical journal. Science 1965; 150:971- 978. Kandel ER, Schwartz JH, Jessell TM. Published in medical journal Principles of Neural Science, 4th ed., pp.178-180. McGraw-Hill, New York (2000).

“NHC Cyclo-Therapy® (CVT) has made such a difference to my life”: Dr Ahmed practising GP.

Dr Ahmed told us “I was a practising GP and I was diagnosed with large multiple gastric tumours. Extensive surgery to remove them and chemotherapy left me with severe tissue damage and painful stomach scarring, I ended up walking with a stoop due to my scar and chronic back pain. Chemotherapy gave me joint and neuropathic pain in my fingers and hands. I was on morphine, anti-inflammatories and daily tramadol to manage pain and I could not work properly for 5 years. I was introduced to CVT by my physiotherapist to use on my scarring and back to see if it could release the tethered tissues. As a GP I was a little sceptical not knowing about CVT but I was desperate to try anything. After the first 5 x 30-minute therapy sessions there was a huge improvement. There was a release and relaxation in my stomach muscles allowing me to walk straighter, reducing my back pain. With continued use of CVT I was nearly pain free and stopped all of my pain medication enabling me to work full time. I cannot recommend it enough the difference it has made to me.”

Cycloidal Vibration Therapy (CVT) – reducing post exercise pain (DOMS). Delayed onset muscle soreness.

Apply Niagara Equissage Pulse® Before and After Exercise

Delayed-onset muscle soreness (DOMS) is a symptom of exercise-induced muscle straining or injury that is commonly encountered in athletes and fitness enthusiasts or if muscles are generally over worked.

DOMS can be felt by the horse 24 - 48 hours following hard exercise. DOMS is considered to be related to the microscopic tearing of muscle fibres.

The subsequent healing of the ruptures creates the soreness due to the temporary changes caused in muscles unaccustomed exercise. Other such changes include decreased muscle strength, reduced range of motion, and muscle swelling during soreness and healing.

In humans 10 research studies on over 258 people found that applying vibration therapy similar to CVT in Equissage to the area of the body either before or after exercise can reduce muscle pain for up to 72 hours.

Reference: Xingang Lu et al. Does vibration benefit delayed-onset muscle soreness?: a meta-analysis and systematic review. Journal of International Medical Research 2019, Vol. 47(1) 3–18

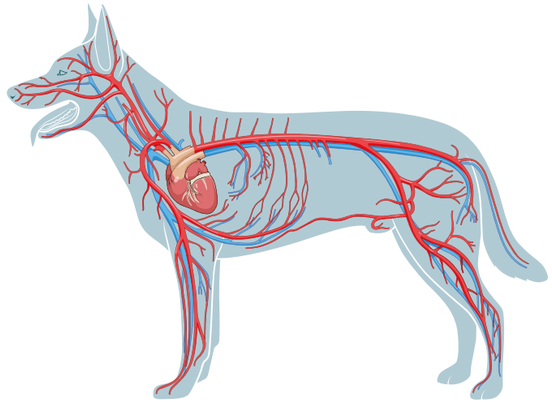
“My horses and I love The Equissage, as one of its many benefits is that it is so portable to use at shows for warming up and cooling down. “Heike Holstein, Irish International Team Dressage Rider.

"Having used Equissage on all my horses from Racehorses to Dressage horses for over 20 years. I was amazed with the results I felt after using therapy on myself, especially in such a short space of time. My stiffness is reduced, and my flexibility is improved in areas that would be extremely tight"
Charlotte Cundall – Team GB Para Rider

Cyclo-Vibration Therapy (CVT) Used by Professionals.

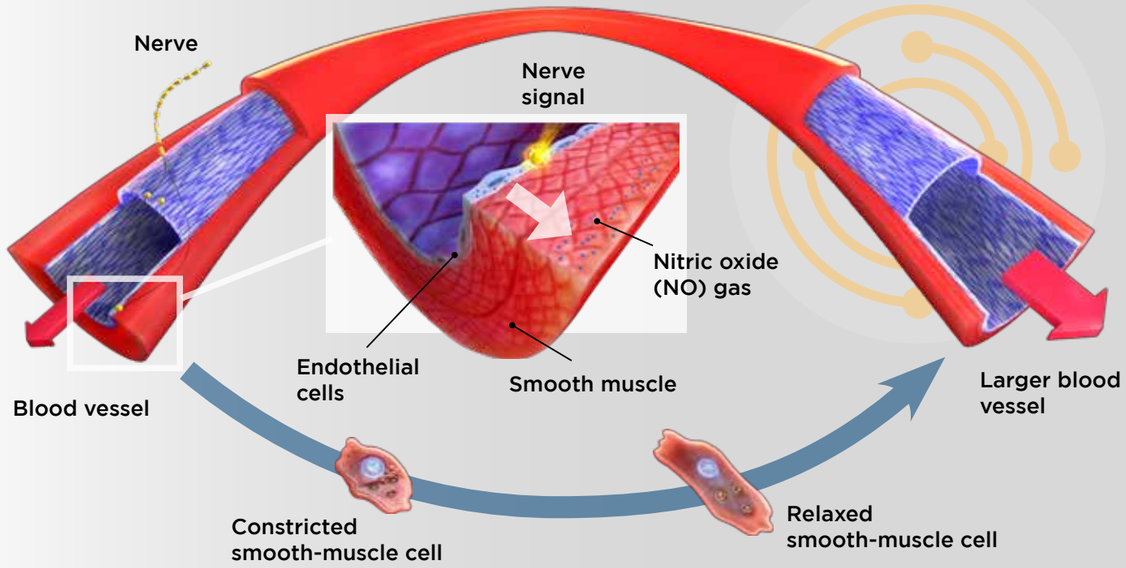
CVT products are used at specialist spinal injury centres across the country. Occupational and physiotherapy use CVT to relax tight muscles, soften tissues reducing swelling and pain management.
"We use it daily for reducing high tone to get muscle relaxation" *Emma Lindley – Clinical Lead Occupational Therapist, London Spinal Cord Injury Centre.*

Cycloidal Vibration Therapy (CVT) – improving blood flow circulation



How does CVT increase circulation?

The non-invasive application of CVT results in a process called mechano-transduction the process of cells converting mechanical energy into chemical activity. The therapy penetrates into the vascular cells that line the blood vessels results in the stimulation of a number of chemical reactions. This includes the release of the chemical nitric oxide, this chemical is a natural relaxant of smooth muscle. Nitric Oxide relaxes the smooth muscle walls of the blood vessels, this can increase the diameter and size of the blood vessels (veins and arteries), resulting in dilation and allowing more blood to flow in the area treated with CVT.

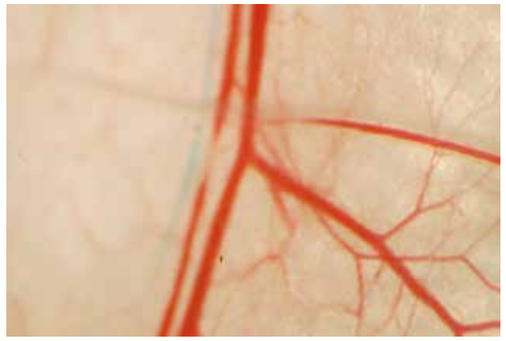


Reference: Clinical Reference. Sackner MA, Gummels E, Adams JA. Mount Sinai Medical Center, Miami Beach, USA. Nitric Oxide is released into circulation with wholebody, periodic acceleration 127: 30-39 (2005). Published in Chest. Official medical Journal of the American college of Chest Physicians.

Increase in blood vessel flow and diameter observed in skin and soft tissue after 10 minutes in the following study:

Influence of NHC cycloidal vibration on skin blood flow changes observed in an invivo microcirculatory model. Reference Professor Pierre Lievens. Head of the department of Medical Rehabilitation Research. Faculty of Medicine, Vrije Universiteit Brussels. Presented at Wounds UK medical conference. Autumn 2011.

Before



After 10 minutes of cycloidal vibration

Note the enlarged veins due to the increase in blood vessel flow.

Reference - Professor Pierre Lievens. Head of the department of Medical Rehabilitation Research. Faculty of Medicine, Vrije Universiteit Brussels. Presented at Wounds UK medical conference. Autumn 2011.

Improving skin and soft tissue circulation with CVT has shown to help heal difficult wounds.

Start wound 7 months diabetic

Week 4 of CVT

Week 6 of CVT

7 month old Diabetic foot ulcer receiving standard wound care treatments combined with a new post-surgical wound. Patient with a long history of vascular disease resulting in ulcers and ischemia. A number of toe amputation procedures due to arterial disease. NHC Cyclo-Therapy® applied to increase blood flow 3 x a day for 30 minutes a 7 month old ulcer healed in 6 weeks.

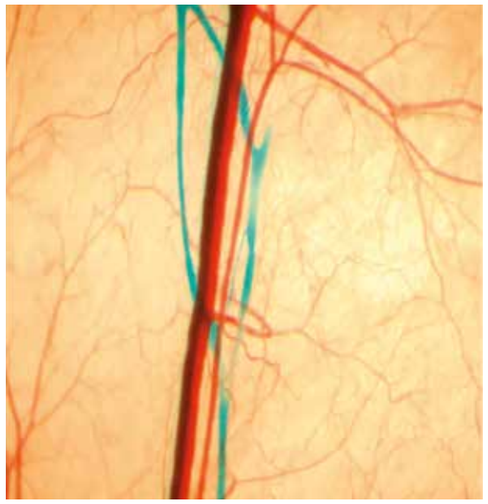
Reference - Johnson S, et al. Wound Care Team, Doncaster Royal Infirmary. Cycloidal Vibration Therapy (CVT) treatment of post-surgical diabetic lower limb wound. Presented at Wounds UK 2012 conference

Lymphatic system circulation.

90% of fluid in the body is circulated by blood vessels and 10% by the lymphatic system as the body's overflow system. Lymphatics are vital in removing excess fluid and oedema, as they remove not only fluid, but also the larger particulate matter such as proteins, microphages and metabolic waste material, which cannot be removed via the blood capillary system.

Cycloidal Vibration Therapy (CVT) stimulates lymphatic flow as can be shown in the before and after pictures.

Before



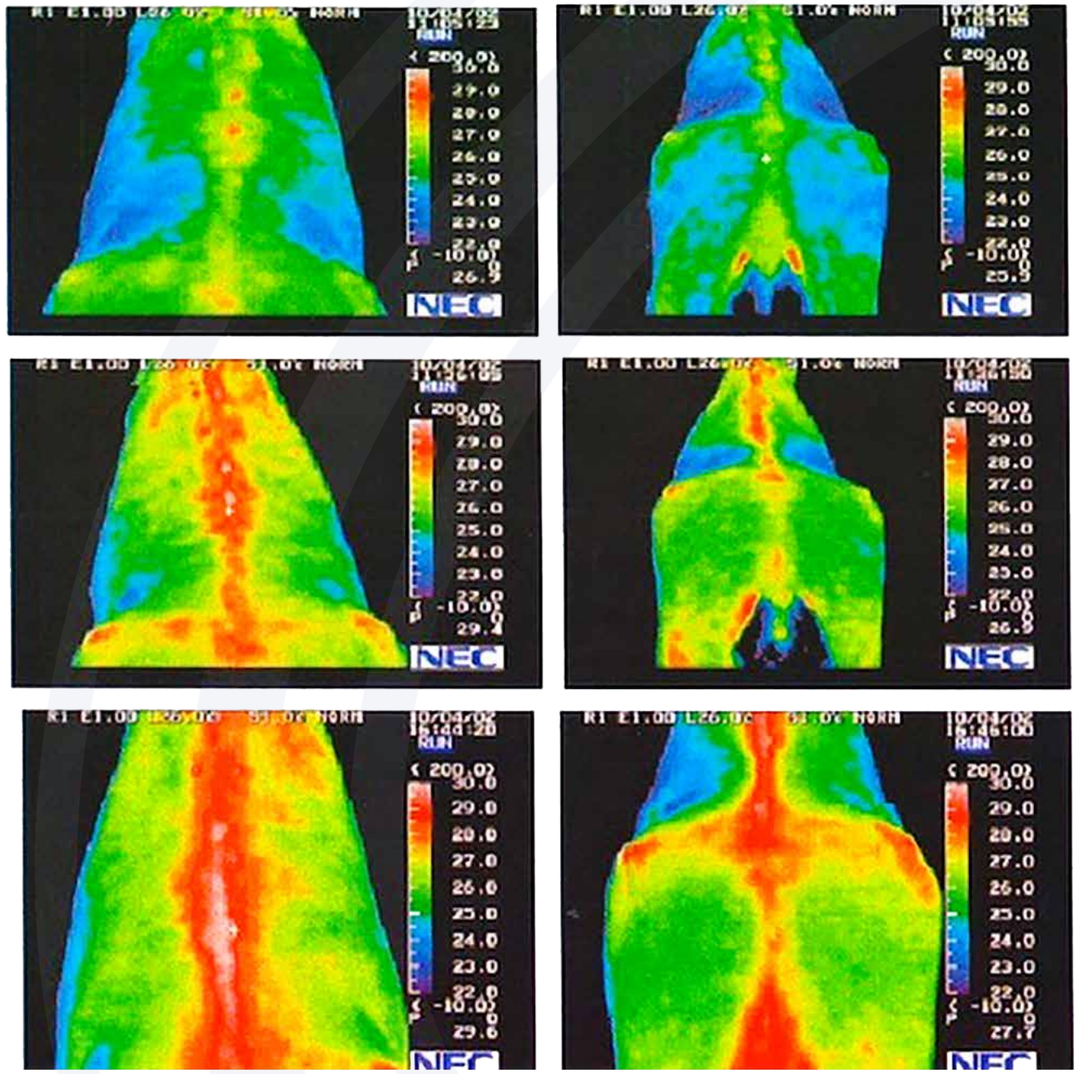
After
The Lymphatic vessel is highlighted with blue dye before and after 10 minutes cycloidal vibration. Clearly visible in the after photograph is the increased lymphatic flow.

Reference - Influence of cycloidal vibration on lymphatic flow and changes observed in lymphatic vessels. Professor Pierre Lievens, Vrije Universiteit Brussels. Head of the department of Medical Rehabilitation Research. Vrije University Brussels, presented at Wounds UK 2008 medical conference. 2008.

"My horses could not live without Equissage Pulse; they feel so much more relaxed and happy within themselves."

KATIE JERRAM

Increase in blood flow due to the non-invasive application of CVT has been shown in numerous ways including measurement by Laser Doppler imaging and plethysmography.



First Photo Row: Horse Before Niagara Equissage Treatment. Blue/Green indicates areas of poor circulation.

Second Photo Row: 5 Minutes After Niagara Equissage Treatment. Yellow/Red indicates improved circulation.

Third Photo Row: 5 Hours After Niagara Equissage Treatment Ended. Shows continued improved circulation.

Healthy Circulation means Healthy Tissues, Healthy Horse.

"Working as a Chartered Physiotherapist in Animal Practise since the mid 1980's very little remains familiar from that time. However the Niagara Equissage therapy system remains and is still my number one device that I use and recommend. Consistency, performance, durability, service and results are what I get from Niagara Equissage. My patient case load has included several Classic and Cheltenham winners , and European Team sport horses, who have benefitted from the Equissage to help maximize their performance." ***Elizabeth Kent. Chartered Physiotherapist.***

Helping Humans not Only Animals: CVT Rider Pad

Irish Olympic eventer Jonty Evans is making remarkable progress after a fall in competition at Tattersalls in 2018 that left the eventer with serious brain injury and in a coma for 6 weeks. As part of his rehabilitation therapy Jonty is now benefiting from the Cyclo-Vibration Therapy found in Equissage Pulse Digital. Relaxing high tone and stiff sore muscles " When I applied the human Cyclo-Therapy pad behind my back and under my legs I could feel a real difference in the relaxation and stretch in my muscles enabling me to move my hip and joints with greater movement, I was really surprised". ***Jonty Evans, Irish Olympian.***

Cycloidal Vibration Therapy (CVT): Research and Testing

Over many years, CVT has had extensive clinical testing, focused case study reviews and medical/veterinary research on humans and animals. The following are a few of the results so you can be confident that your decision to invest in Canissage is the right choice.

Improved Mobility

In this group of horses, this study found that Cycloid Vibration Therapy (CVT), has an immediate effect on the horse by altering thoracic range of motion, thoracolumbar musculature and pelvic symmetry. In the placebo group, who followed the same protocol excluding receiving any vibration therapy, no changes in any measured parameters were observed. ***Royal Veterinary College/Centaur Biomechanics - UK***

Improved Speed and Length of Stride

Not only did the stride length appear to improve, but also an increase in the speed of the stride (from average 2.6 m/sec to 3.1 m/sec). Therefore, the racehorse, polo pony and eventer will all perform with fewer strides in faster time.
Dietrich Graf von Schweinitz, Veterinary Surgeon, Writtle College UK

Increase Speed and Length of Stride

Equissage CVT treatments prior to half-mile breeze improved post workout recovery within the first S minutes from 71 % to 85.5%. Equissage treatments prior to a gallop allowed the mare to move a tick faster for the distance, while expending less energy. Equissage treatments 20 minutes before the post parade improved the Beyer figure by an average of 15 points. ***ThoroEdge Equine Performance Study***

Cycloidal Vibration Therapy (CVT): Research and Testing

Improved Healing of Wounds

Using CVT to stimulate the circulation to enhance healing can significantly reduce treatment costs. Benefits include faster healing times, better quality oflife and a marked reduction in pain. ***Journal of Wound Care vol 14, no 9***

Improved Lymphatic Drainage

The core of the product CVT has local and worldwide potential in the management of existing disorders in blood, tissue and lymphatic systems. CVT has demonstrated that their equipment complies to the TGA medical devices essential principles.
Professor Dr. Neil Piller, Flinders University School of Medicine

Statistically significant improved walking in patients with circulation problems using CVT

A statistically significant and substantive improvements from baseline after 12 weeks using Cycloidal Vibration Therapy on the effected leg observed in Pain Free Walking distance and Maximum Walking distance in patients with intermitent claudication. The substantive improvement in systolic leg pressure in the treated leg and the concurrent absence of a substantive change in systolic leg pressure in the untreated leg over the same period suggests a causative effect of CVT.
Professor Atkin, Pilot Feasibility Studies. 2019 Nov.

Statistically significant improvement in chest clearance with ICU ventilated patients using CVT

Results suggest that CVT may contribute to expectoration and thus improve lung collapse among ventilated patients in an ICU. CVT nursing intervention is a safe and effective alternative pulmonary clearance method and can be used on patients who are on ventilators in ICUs. ***J Chin Med Assoc. 2009***

Reducing Pain & Enhancing Mobility

The Equissage units are used daily to improve the comfort and mobility. We believe that with regular use of the Equissage CVT units has been helpful in maintaining comfort and quality of life, especially in the colder months. We have also found additional uses for the equipment in reducing discomfort.
Dr Simone Vitali BSc BVMS PhD MANZCVS, Perth Zoo

Journal of Wound Care vol14, no9, April 2005

Using CVT to stimulate the circulation to enhance healing can significantly reduce treatment costs. Benefits include faster healing times, better quality of life and a marked reduction in pain.

Professor Dr. Neil Piller, Flinders University School of Medicine 2004

The core of the product CVT has local and worldwide potential in the management of existing disorders in blood, tissue and lymphatic systems. It has demonstrated that their equipment complies to the TGA medical devices essential principles.

Cycloidal Vibration Therapy (CVT): and my other animals

When called upon, Niagara Equissage has been used to help a range of animals in wildlife parks around the world.

CANISSAGE PULSE

Your Quick Reference Plan

WEEK 1

Time:

Speed/Intensity:

Frequency of use:

NOTES:

WEEK 2

Time:

Speed/Intensity:

Frequency of use:

NOTES:

WEEK 3

Time:

Speed/Intensity:

Frequency of use:

NOTES:

WEEK 4

Time:

Speed/Intensity:

Frequency of use:

NOTES:

Provide plenty of water before and after each session. This will assist in flushing out any excess toxins. Our aim is for your dog to improve in key areas of performance and health. If you have any questions on getting the most out of your Canissage then contact our customer service team on.

Canissage Pulse: Instructions for Use

Getting Started

This manual will show you how to set up, use and care for your Canissage System.

It is recommended that you read this manual thoroughly so that you are confident in introducing Cycloidal Vibration Therapy to your dog and know how to best treat for various conditions.

Your Canissage Agent will be able to assist you if you have any questions along with our dedicated Customer Care Team if needed.

> ***"I see the benefits of Niagara Equissage helping horses with all my clients that actively use the product" Irene De Best - Veterinary surgeon.***

PLEASE NOTE: Just like humans, every dog is different however the effects of the Canissage Cycloidal Vibration Therapy (CVT) are consistent and will achieve maximum therapeutic benefits through a regular program of use.

Some dogs may receive greater benefit with variations to the treatment recommendations detailed in this manual.

There are a wide variety of external factors that will, in turn, affect the outcomes and the level of benefit obtained. If chronic or acute symptoms continue then Veterinary advice is recommended in addition to utilising Canissage Cycloidal vibration with your dog.

Information Symbols

Caution:
Indicates the need for the user to consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons be presented on the device intself.

Consult Instructions for Use:
Indicates the need for the user to consult the instructions for use.

CE Marking:
Indicates that a product has been assessed by the manufacturer and deemed to meet EU safety, health and environmental protection requirements.

Waste Electrical and Electronic Equipment:
Indicates that the product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.

Contents of your new Canissage

In your set, you will receive your

- **Canissage Pad**
- **Power Transformer**
- **Power Bank Battery (Optional) and charger***

*upgrade option.

Settings

Your Canissage contain the following settings options.

- **60 settings to find the optimal application to benefit your dog.**

Standard Setting - Cycloidal Vibration Therapy (CVT)

Standard setting delivers Cycloidal Vibration Therapy in a constant speed motion. CVT produces an elliptical in a three-dimensional wave moving up and down left to right in a circular motion all at the same time. The end result is a deep, penetrating tissue and muscular massage which has no harmful side effects. This setting is commonly used on day-to-day treatments.

Poly Modulation – CVT

Poly Modulation is a variation of the Canissage constant CVT setting. This provides a deeper surging action, best used when extra stimulation is required. By alternating the delivery of CVT between the highest and lowest settings quickly it has a deeper effect to help promote muscle stimulation and lymphatic drainage, which further assists in reducing swelling and allows muscles to expand and contract gently to assist rehabilitation of muscle groups and as a warmup before competition.

Poly Modulation is a great therapy setting to use when increased stimulation to tissue, fluids and muscle groups is required. It is also an ideal setting for conditions that involve rehabilitation of muscles, ligaments and tendons.

Relaxing-Rhythm – CVT

Relaxing rhythm produces slow-moving, rhythmical waves of CVT which penetrate deeply into the tissue producing a hypnotic effect on the nervous system. Whenever a greater need for relaxation and a calming effect is required it is the ideal setting and can be used as often as required. Moving the massage intensity from highest to lowest setting via a unique undulation, this aids in achieving the ultimate relaxation.

Introducing your dog to Canissage

Initial introduction to using Canissage therapy is extremely important for your dog so they remember it as a pleasurable experience.

Place the Canissage on a flat surface and get your dog to sit/ laydown. You can also place their blanket or bed on top of the Canissage or use one of our Canissage Duvets. Then once happy turn on the pad on a low intensity.

When therapy is starting initially make sure you give your animal plenty of praise and reassurance. Once your dog is settled you can start to increase the intensity.

If you have a particularly nervous dog you may wish to take longer or do a few short sessions to allow them to get use to it. However most dogs settle within a few minutes and will happily stay on the bed alone without needing reassurance after 10-15 minutes.

If you have a particularly nervous dog, you could start with a few short sessions with lots of praise to give them time to build confidence before trying a longer session/ higher intensity.

For any questions regarding introducing your dog to your Canissage please take a look on our website or feel free to give us a call.

			TIME minutes			
CONDITIONS	SETTING - CVT		DAY 1	DAY 2	DAY 3	DETAILS
Abscess	Standard	5	20m	25m	20m until clear	
Adhesions	Standard	4	20m	20m	20m until clear	
Bruising	Polymodulation	3 to 4	20m	20m	20 -30m	
Circulation	Standard	2 to 6	20m	15n	15m	
Contusions	Standard	5	15m	15m	15m	
Cysts	Standard	4 to 5	15m	20m	20m until clear	
Detox x 3 day	Standard	2 to 4	20m	20 to 30m	20 to 30m	
Diabetes Inflammation in unregulated diabetes	Polymodulation	2 to 3	20 to 30m*			*Use as required to reduce inflammation
Fractures	Standard	2 to 3	20m	20m	15m	Up to 10 days
Geriatric	Polymodulation	3 to 4	20 to 30m		20 to 30m	1 week and beyond, treat 2 to 3 times per weekly
Idiopathic polymyositis	Polymodulation	3 to 4				
Weakness	Standard	5	20m	25m	20m until clear	
Lameness	Standard	4	20m	20m	20m until clear	
Reluctance to exercise	Polymodulation	3 to 4	20m	20m	20 -30m	
Stiff gait	Standard	2 to 6	20m	15n	15m	
Exercise / activity related progression of weakness.	Standard	5	15m	15m	15m	
Muscle pain palpation.	Standard	4 to 5	15m	20m	20m until clear	
Muscle Atrophy	Polymodulation	3 to 4				

			TIME minutes			
CONDITIONS	SETTING - CVT	INTENSITY	DAY 1	DAY 2	DAY 3	DETAILS
Inflammation – Joints	Polymodulation	4 to 6	20m	20m	25m	
Inflammation-general	Standard	4	20m	20m	20m	
Wounds	Standard	3 to 4	20 to 30m	20 to 30m	20 to 30m	1 week and beyond, treat 2 to 3 times weekly
Ligaments	Polymodulation	4 to 5	20m	20m	20m	Unit to nearest nerve point on 1/2 speed
Lymphodoema						
Acquired	Polymodulation	3 to 4	20 to 30m	20 to 30m	20 to 30m	
Mange	Standard	5 to 6	25m	25m	25m	
Muscles	Standard	4 to 5	20m	20m	20m	
Pain Management	Standard	4 to 5	15m	20m	20m until clear	
Physiotherapy	Polymodulation	3 to 4	20 to 30m	20 to 30m	20 to 30m	1 week and beyond, treat 2 to 3 times weekly
Post injury detox	Polymodulation	3 to 4	20m	20m	20m	
Post Operative	Relaxing Rhythm	1 to 2	20m	20 to 30m	20 to 30m	
Post operative detox	Relaxing Rhythm	2 to 4	20m			
Pre med	Relaxing Rhythm	1 to 2	10m			
Proud flesh	Standard	4	20m	25m	25m	
Reproductive-regulate lymphatic and hormonal systems	Polymodulation	3 to 4	20 to 30m	20 to 30m	20 to 30m	
Scar tissue	Standard	5	10m	15m	15m	
Skin support / dermatitis	Standard	3 to 4	20 to 30m	20 to 30m	20 to 30m	
Soft tissue injuries	Polymodulation	4	20m	25m	25m	
Strains	Polymodulation	4	20m	25m	25m	
Tendons/ ligaments	Standard	3 to 5	20m	20m	20m	

NB: The frequency of application is usually once daily, although additional treatments are beneficial. This schedule is to be used as a guideline only. It is designed to show you how you can help with a number of specific conditions.

DISCLAIMER SAFETY: *The Canissage Pad, batteries and accessories must be used following the instructions for use for safety and effectiveness. Whilst provisions are made with respect to safety we accept no responsibility for any complication or incident due to instructions not being followed accurately and for any misuse of the product.*

Preparing To Use Your Canissage

Your Canissage Pad will either

1) Be mains powered transformer.

Or

2) Canissage power bank battery (Optional Extra) Before using your Canissage Pad or you should first ensure that the power pack battery is fully charged.

THE CANISSAGE POWER BANK BATTERY

Is a Lithium-Ion Rechargeable Unit. NOTE – on receiving your battery please fully charge before use.

Battery Chargers Provided

1) Mains powered charger

2) Portable 12V portable cigar lighter connection charger

WARNING – IF A LITHIUM-ION BATTERY IS USED INAPPROPRIATELY OR DAMAGED NOT FOLLOWING CARE INSTRUCTIONS, IT CAN RESULT IN LEAKAGE, OVERHEATING, SMOKE EMISSION, BURSTING, IGNITION / FIRE

CANISSAGE BATTERY CHARGERS INSTRUCTIONS

Always use the charger supplied with your Canissage pad as this is specifically designed to handle your Lithium-Ion battery.

BATTERY CHARGERS

When you place your batteries on charge a RED LED will light on the charger indicating batteries are charging. The LED on the charger turns GREEN when the battery is fully charged.

NOTE – please turn off the charger once the battery is fully charged. Overcharging the battery can damage the battery and lead to reduced battery life.

BATTERY CHARGE INDICATION STATUS		
LED Colour	**Equissage Back Pad**	**Equissage Hand Unit**
GREEN	Battery OK	Not Applicable
FLASHING RED	Battery Low, Re-charge	Battery Low, Re-charge
RED	Battery critically low – Motor switches off. User should switch off the device and disconnect and recharge the battery	Unit powers off. If the user tries to turn back on then the red light flashes for 0.5s and the unit powers off again. The user needs to recharge the battery
AUTO switch off	LED = flashing green. User should switch off the unit to avoid draining the battery. To restart switch off and back on again.	Not Applicable

BATTERY CARE, MAINTENANCE AND STORAGE

Lithium-Ion rechargeable batteries require routine maintenance and care in their use and handling. Read and follow the guidelines in this document to safely use Lithium-Ion batteries and to achieve the maximum battery life span. **A separate data sheet is also included with the Equissage system specific to the Battery Care, Maintenance and Storage.**

Do not leave batteries unused for extended periods of time. When a battery has been unused for 6 months, check the charge status and change or dispose of the battery as appropriate. Rechargeable Lithium-Ion batteries have a limited life and will gradually lose their capacity to hold a charge. This loss of capacity (ageing) is irreversible. As the battery loses capacity, the length of time it will power the product (run time) decreases. Correct battery charging, care and storage will prolong the life of your battery.

STORAGE: Always store in a dry, clean, cool environment in a fully packaged condition. Storage charge or discharge the battery approximately 50% of capacity before storage. Charge the battery to approximately 50% of capacity at least once every six months.
Remove the battery and store it separately from the product.

TEMPERATURE WARNING: Store the battery at temperatures between 5°C and 20°C (41°F and 68°F). NOTE – the battery self-discharges during storage. Higher temperatures (above 20°C or 68°F) reduce the battery storage life.

DO NOT "short charge" – make sure the battery runs through a complete charging cycle and only return to service that charging is complete.

HANDLING PRECAUTIONS

IMPORTANT – For your safety and that of your customers, observe all cautionary information provided in this document. Save this document for future reference. The following information is intended to highlight potential safety hazards that can be associated with the misuse, misapplication or damage to rechargeable Lithium-Ion batteries.

- DO NOT disassemble, crush or puncture a battery
- DO NOT leave a battery in an area where it is at risk of puncture or crushing
- DO NOT use a visibly damaged battery (either with a damaged battery casing, connector or cable)
- DO NOT short the external contacts on a battery
- DO NOT dispose of a battery in fire or water
- DO NOT expose a battery to temperatures in excess of 60°C (140°F) eg. Leaving in direct sunlight, in a vehicle in hot weather etc.
- DO NOT expose the battery connection to other metal objects
- DO NOT connect the battery to additional batteries or use any unspecified chargers
- DO NOT connect the battery to damaged products.

BATTERY OVERCHARGING / INCORRECT CONNECTIONS: NOTE:

The Niagara Equissage batteries and chargers supplied with your Niagara Equissage set have been specifically designed for use with your products and are labelled accordingly.

WARNING

Please do not attempt to use alternative batteries or chargers with your Equissage products. NHC Technology Ltd accepts no responsibility for any complication or incident due to incorrect product use.

Battery Care, Maintenacne and Storage

- Once fully charged they should be connected to the respective Massage Unit, taking care to ensure that the connecting plugs are pushed together in the correct orientation.
- The shape of the plugs will allow the connectors to easily fit together.
- To ensure a SECURE CONNECTION of the Canissage power pack battery to the Pad.
- Insert the battery cable into the pad or Hand Unit cable as shown below.
- Twist CLOCKWISE as indicated to lock the cables together.
- To unlock, twist ANTI-CLOCKWISE to release.

PLEASE NOTE – Do not try to pull the plug and socket apart once locked as this could damage both the plug and socket.

Canissage Pad Operation

- Place the Canissage Pad on the floor in an appropriate area.
- Ensure any cables are tucked away.
- Holding the hand control handset. Turn the Back Pad on, press the POWER ON/ OFF button. a Green LED will illuminate and the LCD display will show 00 within the time display window and 0.0 within the speed window.

START THE TIMER

- To start the Niagara Equissage Pulse® digital pad, time must first be set. To select the time, the upper left arrow button is pressed associated to the “time” selection. Time can be set in 5 minute intervals from 5 to 60 minutes as displayed by the left display screen.
- To reduce or cancel time, press the bottom left arrow button.
- Once time is set, the timer will count down in 1-minute increments as displayed.
- When time reaches 0, the therapy will stop.

Cycloidal Vibration Therapy Intensity

- When time is set, the therapy intensity can be selected.
- Pressing the upper right arrow button, the Therapy will START at the minimum setting of 1.0 as indicated in the right LCD display (Minimum 1.0 to Maximum 9.5).
- Holding the button down will slowly increase the intensity level until the desired setting has been reached.
- To reduce the intensity, the bottom right arrow button when pressed, will slowly reduce the speed until 0.0 which will switch the therapy off

BUTTON – CYCLOID-ACTION: (see page 28)

This is the default setting of the device – when selected from another therapy output the Cycloid-Action therapy will deliver a constant level of therapy.

BUTTON - POLYMODULATION: (see page 28)

Once the intensity level selected is above 1.5 and the timer has been set, selecting POLYMODULATION will start this therapy action.

BUTTON – RELAXING RHYTHM: (see page 28)

Once the intensity level selected is above 1.5 and the timer has been set, selecting RELAXING RHYTHM will start this therapy action.

TO STOP THE THERAPY either

- Press ON/OFF button or Press the TIMER down button.
- The THERAPY will stop automatically once the timer reached 0.

Hand Set and Cable Storage

Once you have set the Canissage Pad to the desired setting place the hand set inside the pocket.

Device start-up – the device will default to always start on the standard cycloid action

NOTE REMEMBER: Turn products off when changing batteries.

Warming Up or Down

Most people use Canissage before and after they exercise their dog as it stimulates circulation and muscles and aids in warming up before exercise. After exercise this will relax the dog and help reduce the build up of lactic acid and the stiffening of muscles and joints.

Respiratory Focus: Breathing Problems

Most breathing problems, can be treated by the Canissage Pad if used on a daily basis to help with chest clearance.

Care, Technical, Guarantee

DISCLAIMER Safety: The Canissage Pad, power supplies, batteries and accessories must be used following the instructions for use for safety and effectiveness. Whilst provisions are made with respect to safety we accept no responsibility for any complication or incident due to instructions not being followed accurately and for any misuse of the product.

NEW BATTERIES

New batteries can be obtained from NHC Technology Ltd. (Equine Division)

CARE – CANISSAGE

STORAGE – ideally store your Canissage in a dry, clean, cool environment.

CABLES – ensure all cable are appropriately stored and managed.

CLEANING

The cover of the pad should be cleaned regularly by wiping with a damp cloth – a mild tablet soap may be used however, they should be rinsed clean by wiping with a fresh damp cloth before drying with a dry lint free cloth.

DO NOT – immerse the Canissage in water or fluid this will permanently damage the electronics in the products.

DO NOT – carry or lift the products by the cables this risks product damage.

TAKE CARE – to prevent hair and small objects from entering the air vents.

Technical Details

Cycloidal Vibration range: a mechanical form of oscillation vibration producing a 3 dimensional movement of varying magnitude longitudinal, vertical and transverse to the vibrating surface. It has a frequency range of between 5Hz and 60Hz and an amplitude range of between 0.02 mm and 1.4 mm.

Disposal: The device carries the WEEE mark – this indicates it should be disposed of as per the local / national guidelines. For more detailed information refer to pages 19&20.

Reciprocal Interference: The device complies with BS EN 60601-1-2 (Medical electrical equipment. General requirements for basic safety and essential performance. Collateral standard. Electromagnetic compatibility. Requirements and tests) Household appliances will have no detrimental effect on the operation of this device / compliance shows the device is compatible with the regulations.

TROUBLESHOOTING : Should the device fail for any reason first check the cables are connected and intact if using a battery ensure charged and the device has been connected as per the instructions. Should this still not work then please contact the number shown on the reverse of this user manual for further advice. There are NO user serviceable parts in this device.

Guarantee

For queries or matters relating to your guarantee, please contact where you purchased the product. The guarantee is confined to the customer of the product only and is only valid on presentation of an invoice or original proof of purchase (receipt). Under law, the Contract of Sale exists between the retailer and the consumer. If the guarantee conditions have been satisfied, the retailer will then liaise with us (NHC Technology Ltd UK) on your behalf. This guarantee is not insurance backed.

If a product inspection is required we will contact you to arrange a suitable arrangement. This may involve a visit inspection or the return of the product to the manufacturer. (NHC Technology Ltd UK).

NOTE: The guarantee will only cover manufacturing defects or faults that have been inspected and certified. If the product in question has been discontinued and cannot be repaired, we reserve the right to supply an equivalent alternative.

From the date of purchase your Niagara Equissage Pulse® Digital (saddle and hand unit and accessories **EXCLUDING Batteries and chargers**) is guaranteed for 2 years.

Please NOTE Niagara Equissage Batteries are guaranteed for 6 months from date of purchase.

The Canissage Pad will be repaired or replaced at pro-rated allowance, at our option, if it is defective due to faulty workmanship or materials for 2 years from date of purchase; subject to the limitations described in this guarantee.

NOTE – Batteries are not included in this Guarantee.

This guarantee does not extend to:

Normal wear and tear, or damage caused by misuse, careless treatment or negligence.

Examples of misuse would include (but are not limited to):

- **Plastics or Electronics damage due to dropping of the product.**
- **Excessive Twisting of cables.**
- **Bite damage to coverings / cables or hand sets.**
- **Excessive bending of cable connections.**
- **Excessive force applied to cables or connectors.**
- **Excessive force applied to buttons or controls.**
- **In correct cleaning or storage.**
- **Instruction for use and care guide not being appropriately followed.**
- **Subjecting the product to excessive wear and tear resulting in fabric damage.**
- **Excessive bending of the saddle pad and strain on buckles or straps.**

- **Incorrect Storage of the product as per the Instructions for Use.**
- **If the product has been too wet, or has been heavily soiled.**
- **Small manufacturing irregularities that do not affect the performance of the product.**
- **Defects due to causes beyond our control such as, Accidental Damage, floods or fire.**
- **DAMAGE to the products as a result of the accompanying product instructions for use and care guide not been appropriately followed.**

In the event of a dispute we may request a third party inspection of the product before agreeing to carry out repairs/replacements.

Following a repair, the guarantee will remain valid from the date of the original purchase. This is only valid if Guarantee work is undertaken by NHC Technology Ltd or an approved third party.

This guarantee is not transferable it is between the original purchaser and retailer ONLY. The terms of this guarantee are governed by English Law.

Batteries and Chargers are covered by a 6 month guarantee from the date of purchase against defects, resulting from manufacturing or material faults. This is only valid if Battery and Charger Instructions for Use are followed appropriately.

EXTEND YOUR WARRANTY BEYOND 2 YEARS

For piece of mind you can extend your warranty for nominal cost per month. This will cover the costs of any product failures or warranty repairs due to manufacturers fault beyond the 2 year guarantee.

Contact us for more information:

Tel: +441745 811270 or Tel: +441745 811200

www.canissage.co.uk

Interested in joining the Team?
Contact us today on 0800 689 9820

Customer Service:

NHC Technology Ltd, Colomendy Industrial Estate, Rhyl Road, Denbigh.
United Kingdom LL16 5TS. **Tel: +441745 811270 or Tel: +441745 811200**

www.canissage.co.uk

Follow us on social media:

@CanissageUK **@CanissagePulse**

We would love to hear your feedback!
info@canissage.com

Canissage, Niagara Equissage, Equissage Pulse, Equissage in UK and Europe are trademarks of NHC Technology Ltd

NOTE DISCLAIMER - WE SHOULD EMPHASISE THAT Canissage Cyclo-vibration Therapy IS NOT A CURE FOR THESE CONDITIONS BUT IT CAN DO MUCH TO HELP ALLEVIATE THE SYMPTOMS ASSOCIATED WITH THEM AND AID HEALTH CONDITIONING. IT IS DESIGNED TO COMPLEMENT THE RANGE OF CURRENT THERAPIES AVAILABLE FROM YOUR VET AND ITS USE CAN ALWAYS BE DISCUSSED WITH A VETERINARY PROFESSIONAL IF YOU ARE CONCERNED. YOU SHOULD NOT DISCONTINUE ANY CURRENT THERAPY WITHOUT FIRST SEEKING ADVICE.

The company reserves the right, without notification, to modify or change, any design or specification at their discretion in accordance with a continued research and development programme.

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