HI FORM™

ProflamAid Plus & ProflamAid Plus Next Generation Nutritional Pellets
The Science of Natural Health

Celebrating 30 years in business in 2020

- Benefit from our obsession with quality, research and a scientific approach to equine nutrition and the treatment of common ailments
- A preventative and treatment formula
- Combining traditional Chinese pain relieving herbs with western nutritional supporting ingredients. (see full list of ingredients on the last page of this document).
- Focuses on enhancing the natural pain relief mechanisms of the body with some help from Traditional Chinese Medicines.
- 85-95% effective with almost 30 years of use
- 100% safe and natural
- Does not mask any condition and does not interfere with messages to the brain
- Stimulates the body's natural healing properties and provides excellent pain relief
- No Glucosamine, Chondoitin Sulphate or MSM as these do not meet the stringent requirements for natural therapy and the equine body.
- Using only TGA listed ingredients for human consumption with supporting data and science backed
- Highly effective formula includes vitamins, minerals and herbal extracts that assist in wound healing and maintaining healthy joints
- No fish proteins, fish oils, by-products, whey powder or bovine products used in any Hi Form formulas, remember horses are STRICT herbivores!

Next page veterinarian Case studies and veterinary testimonies from 1992 - 2003

Veterinarian Equine Case Studies and veterinarian testimonials 1992-2003

with ProflamAid Plus (previously known as P+)

Dr. Gary Stapleton
CASE no. 1.
A German Warmblood 12 years old, medium/advanced dressage horse. The horse was first presented to me for a second opinion having a history of lameness for a period 14 months. X-rays had been taken of the fetlock joint, showing a small chip and degeneration of the joint. Treatment of Phenylbutazone 1V and butalone powders had been administered followed by a course of Cartrophen injections. The horse remained sound for 12 months competing at medium level dressage.
After a period of time the horse became slightly lame and was then re- X-rayed for comparison. Further degeneration of the joint was apparent. The horse was given an intra-articular injection Depo Medrol followed by a further intra-articular injection Hyalavet four weeks later. The horse remained sound for 4 months and then the lameness began again. It was at this stage that we decided to administer the ProflamAid Plus beginning at a dose of 3 large scoops (30grams) am and p.m. for an initial 14-day period. During that period there was no noticeable improvement so it was decided to continue treating at this level dose. After a further 5 days the horse improved by approximately 40%. At the end of 4 weeks the horse appeared sound. The horse competed for 2 more years and has remained sound during this period.

CASE no. 2
English Riding Pony 8 months Pony
Swelling in pastern after a post had fallen on its leg. An X-ray was taken which confirmed a bony reaction on the front of the pastern with a lot of associated soft tissue swelling. The pony was given Butasyl 1V and Butalone paste.
The treatment resulted in minimal reduction in swelling or degree of lameness.
The pony was then administered 3 large scoops of ProflamAid Plus morning and night. After 7 days the swelling was reduced considerably and no lameness was evident.
The owners missed four days of ProflamAid Plus during the maintenance treatment, the swelling increased and the pony was lame, it was returned to 2 large scoops morning and night and after 24 hours the swelling reduced and soreness disappeared.

Dr. Greg Rodda
CASE no. 3.
A 12-year-old TB doing Advanced/Prix St George dressage developed early ringbone in the near side pastern joint. The horse was administered Butazone powder for 7 days and the lameness improved by approx. 40%. It was then decided to continue for a further 7 days at which time the horse was sound. At commencement of the 3rd week the butazone powder was discontinued and within 24 hours the lameness returned. It was decided to administer 3 large scoops of ProflamAid Plus morning and night, within 3 days the horse had improved by 60%. After 14 days the horse was sound. It was decided to discontinue the ProflamAid Plus at this stage, within 2 days the lameness returned. The Butazone powder was then re-introduced for a period of 14 days the lameness continued and there was no improvement. Continence of the Butazone did not improve the lameness. The ProflamAid Plus was reintroduced and the horse became sound again after 8 days. This dose was maintained for a further 7 days by which time the horse began working again. After 4 weeks on 3 scoops morning and night the dose was then reduced to 2 large scoops morning and night. The horse has returned to full work with no signs of lameness and the horse's movement has definitely improved.

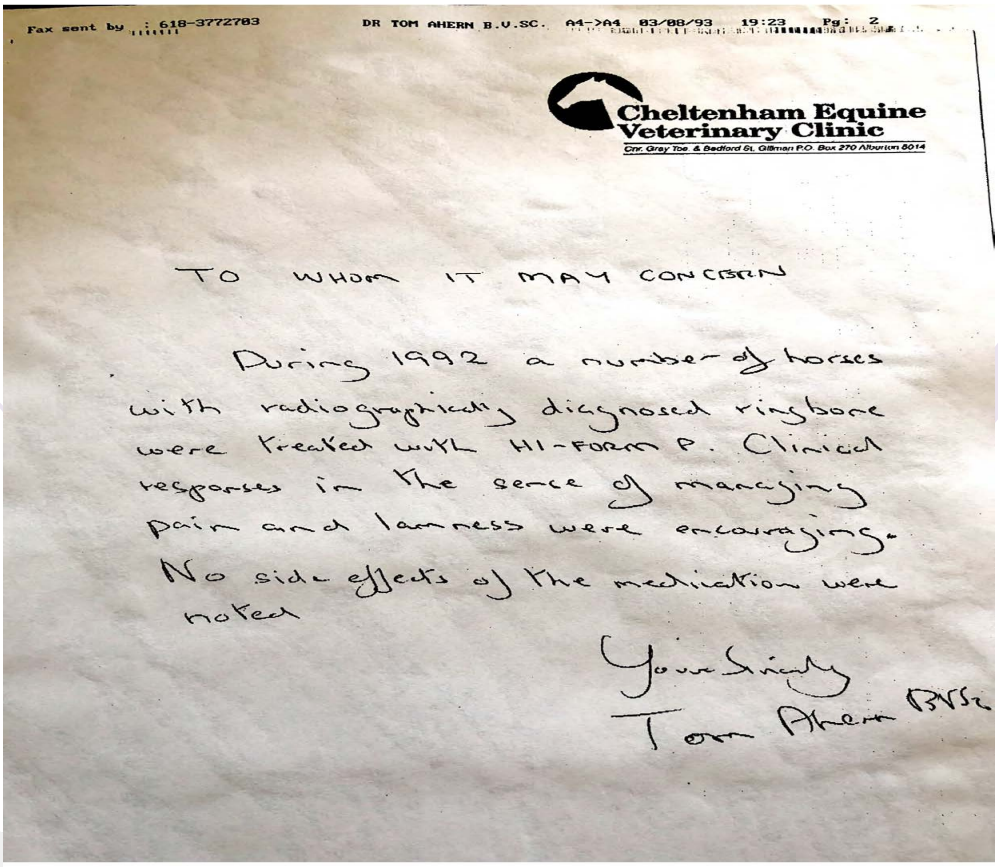
CASE no. 4
A four-year-old TB hunter/jumper with blunt trauma (blunt bolt three inches long) up through the bars area of the near hind hoof through into the navicular bursa. Intravenous antibiotics, poulticing and ProflamAid Plus were used. Due to the long-term need for anti-inflammatory and analgesics, phenylbutazone could not be used, and ProflamAid Plus enabled a satisfactory result over a three-month period after which the horse was put back into work with no lameness. A moderate swelling of the heel and pastern area of the hoof was still evident.

CASE no 5. Group studies
4 horses with degenerative joint disease ranging from mild to chronic aged from 6-15 years of age.
All horses were suffering from varying degrees of lameness.
2 horses A & B were administered 3 large scoops of Hi Form P-Proflam morning and night for 7 days. 2 horses C & D were given Butazone powder (2 grams) for 7 days.
After 7 days the following results were recorded after 10 minutes of lunging at the trot,
Horse A had improved by 20 %
Horse B had no improvement
Horse C had improved by 30%
Horse D had no improvement
After 14 days the following results were recorded
Horse A had improved by 90%
Horse B had improved by 40%
Horse C had improved by 100% and was sound
Horse D had improved by 10%
After 28 days the following results were recorded
Horse A was sound
Horse B had improved by 80%
Horse C previously sound was now slightly lame
Horse D had no further improvement
After 30 days Horse A and B were sound and the Hi Form P-Proflam was discontinued after 4 days both horses were exhibiting some degree of lameness.
After 30 days Horse C was still slightly lame and Horse D had improved only slightly.
After 35 days Horse A, B & C were administered Hi Form P-Proflam at a dose of 3 large scoops morning and night. Horse D was administered a dose of 4 large scoops morning and night.
After 42 days the following results were recorded
Horse A had improved by 90%
Horse B had improved by 95%
Horse C had improved by 50%
Horse D had improved by 60%
After 56 days the following results were recorded
Horse A was now sound
Horse B was now sound
Horse C had improved by 90%
Horse D had improved by 75%
After 70 days with an increase of work now lunging for 15 minutes the following results were recorded
Horse A still remained sound
Horse B remained sound
Horse C was now sound
Horse D had only slight lameness

It was concluded that the Hi Form P-Proflamaid managed the condition of degenerative joint disease safely and effectively and no side effects were reported.
Dr. J. Rudolf

GENERAL CASE STUDIES OF RADIGRAPHICALLY DIAGNOSED RINGBONE
Cheltenham Equine Veterinary Clinic
During 1992 a number of horses with radio graphically diagnosed ringbone were treated with ProflamAid Plus clinical responses in the sense of managing the pain and lameness were encouraging. No side effects of the medication were noted.

Report from Dr. Rob McNeil
15 December 2002
To whom it may concern,
I have used Hi Form ProflamAid Plus in approximately twelve of my equine patients over the course of the last six months.
I have found it particularly useful in the management of tendon and ligament sprains and in those horses with often difficult to pin-point lumbosacral musculoskeletal problems. The product seems to be a very effective anti-inflammatory agent, bringing about a rapid improvement in the acute phase of injury. I have, as yet, little experience of the longerterm healing but based on my experience to date I have high expectations. I have a number of clients who have found it very effective in the older horse with generalized degenerative joint disease. The patient has become much more mobile, generally more active and in many cases less reliant on equipalazone or devil's claw products; often these can be withdrawn completely. The product seems to be very palatable and I have no experience of adverse side effects even at the higher, loading doses.
Robert L McNeil BVet Med MRCVS
Armitage Veterinary Surgery
17 New Rd
Armitage
Rugeley
Staffordshire WS15 4AA UK


Fax sent by : 618-3772703 DR TOM AHERN B.V.SC. A4->A4 03/08/93 19:23 Pg: 2

Cheltenham Equine Veterinary Clinic
Cnr. Gray Tce. & Bedford St, Gilmen P.O. Box 270 Alburton 5014

TO WHOM IT MAY CONCERN

During 1992 a number of horses with radiographically diagnosed ringbone were treated with HI-FORM P. Clinical responses in the sence of managing pain and lameness were encouraging. No side effects of the medication were noted

Yours Sincerely
Tom Ahern BVSc

Please see below the Veterinarian supporting letters regarding case studies, sadly in 2010 we had serious flooding in our office and warehouse and many of our archive files were damaged which included or extensive file of testimonials, so some may be a little hard to read.

DR. GARY R. J. STAPLETON B.V. Sc.
Veterinary Surgeon

P.O. Box 257
Pearcedale 3912
Telephone: (03) 9796 8266
Pager: (03) 9483 4605
Car: 018 320 420

CASE 2.

English Riding Pony

6 months old

The above pony was presented with a swelling on the front of the pastern after a post had fallen on its leg. An X-ray was taken showing boney reaction on the front of the pastern with a lot of associated soft tissue swelling.

On the first consultation the pony was given Butasyl IV and butalone paste.

Treatment resulted in minimal reduction in the swelling or degree of lameness.

The pony was then put on a course of Hyform P the inital dose of 8 scoops daily for five days this was gradually cut down over the following two weeks and now the pony is maintained on two scoops daily.

The swelling has reduced considerably and the pony is showing no lameness.

The owners missed four days of Hyform P during the maintance treatment, the swelling increased and the pony was lame, it was returned on treatment of two scoops a day after which the swelling again reduced and soreness disappeared.

DR. GARY R. J. STAPLETON B.V. Sc.
Veterinary Surgeon

P.O. Box 257
Pearcedale 3912
Telephone: (03) 9796 8266
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German Warmblood
17 year old
Medium Dressage Horse

The horse was first presented to me for a second opinon having had a history of lameness a period of 14 months. X-rays had been taken of the felock joint, showing a small chip and degeration of the joint. Treatment of Phenlbutazone IV and Butalone powders had been administered followed by a course of Cartrophen injections.

After a spell the horse remained sound and was competative at medium level for a period of twelve months. After this period of time the horse was only slightly lame for a period of one month rested for two months, worked for a period of six weeks before showing lamness at which time it was presented to me.

As the X-rays had been taken some time ago I elected to re-xray the horse to have a comparison - further degeneration of the joint was apparent on the X-ray.

The horse was given an intra-articular injection of Depo Medrol followed by a further intra-articular injection of Hyalavet four weeks later and was rested for a period of four months before being put into work remaining sound for fourteen months. The owners elected to put the horse on a course of Phenlybutazone. With no noticable improvement after a two week period. A follow up inra-articular injection of Hyalavet was given and the horse was rested again for a period of four months, remained sound for a period of eight months. The lameness reoccured and the horse was started on Hyform P . Initally it was given a dose of 8 scoops once daily for twelve days, at this stage showing improvement therefore the was reduced over a period of ten days to 4 scoops daily at which time the horse was showing no lameness at all. Six months later the horse is still in work on a maintaince dose of 3 to 4 scoops and continues to be sound. If the ground is hard or the horse has a vigorous training period the dose is increased to 10 scoops. He is showing no lameness at present, and standing up to the work given to him.

There have been no apparent adverse effects observed while on Hyform P.

Please see below the Veterinarian supporting letters regarding case studies, sadly in 2010 we had serious flooding in our office and warehouse and many of our archive files were damaged which included or extensive file of testimonials, so some may be a little hard to read.

HI-FORM IN GENERAL VETERINARY PRACTICE

At PALMWOODS VETERINARY SERVICES we have recommended many products in the HI-FORM range and have been very encouraged with the results.

We feel confident to use these products because of the very high quality raw materials used, and the excellent therapeutic response seen in the right clinical situations.

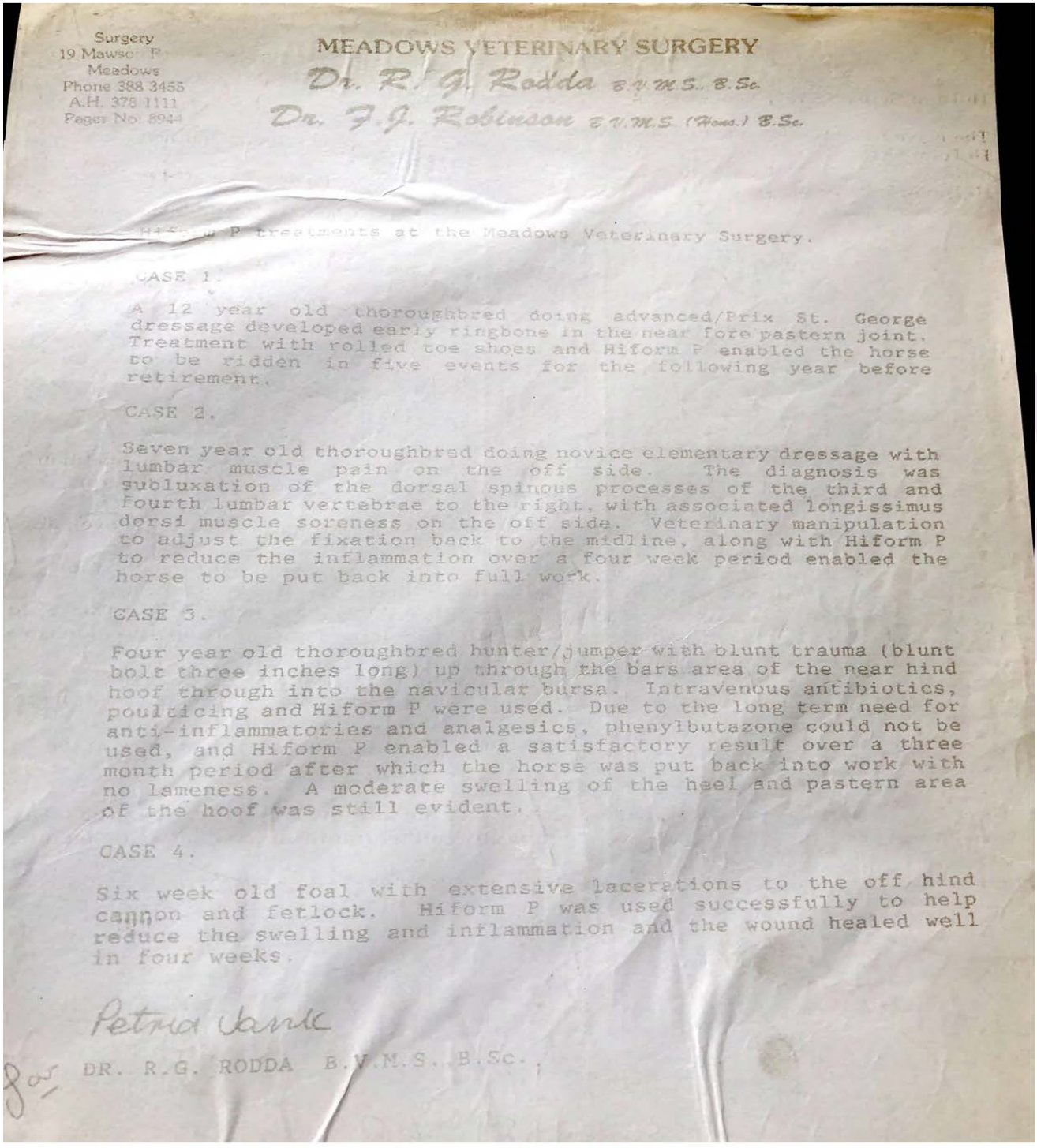
We are always very concerned about the side effects of many drugs when treating long-term inflammatory conditions. It is in these situations that HI-FORM is of great assistance.

However the HI-FORM range not only covers management of chronic inflammation. There are a variety of other products that really work to keep your horse in tip-top condition and help increase their resistance to disease.

Brett Stone

Dr Brett Stone, B.V.Sc (hons), MRCVS,

Please see below the Veterinarian letters regarding case studies, sadly in 2010 we had serious flooding in our office and warehouse and many of our archive files were damaged which included or extensive box of testimonials, so some may be a little hard to read.



Surgery
19 Mawson P
Meadows
Phone 388 3455
A.H. 378 1111
Pager No. 8044

MEADOWS VETERINARY SURGERY
Dr. R. G. Rodda B.V.M.S., B.Sc.
Dr. F.J. Robinson B.V.M.S. (Hons.) B.Sc.

Hiform P treatments at the Meadows Veterinary Surgery.

CASE 1.

A 12 year old thoroughbred doing advanced/Prix St. George dressage developed early ringbone in the near fore pastern joint. Treatment with rolled toe shoes and Hiform P enabled the horse to be ridden in five events for the following year before retirement.

CASE 2.

Seven year old thoroughbred doing novice elementary dressage with lumbar muscle pain on the off side. The diagnosis was subluxation of the dorsal spinous processes of the third and fourth lumbar vertebrae to the right, with associated longissimus dorsi muscle soreness on the off side. Veterinary manipulation to adjust the fixation back to the midline, along with Hiform P to reduce the inflammation over a four week period enabled the horse to be put back into full work.

CASE 3.

Four year old thoroughbred hunter/jumper with blunt trauma (blunt bolt three inches long) up through the bars area of the near hind hoof through into the navicular bursa. Intravenous antibiotics, poulticing and Hiform P were used. Due to the long term need for anti-inflammatories and analgesics, phenylbutazone could not be used, and Hiform P enabled a satisfactory result over a three month period after which the horse was put back into work with no lameness. A moderate swelling of the heel and pastern area of the hoof was still evident.

CASE 4.

Six week old foal with extensive lacerations to the off hind cannon and fetlock. Hiform P was used successfully to help reduce the swelling and inflammation and the wound healed well in four weeks.

Petria Vard

DR. R.G. RODDA B.V.M.S., B.Sc.

The ProflamAid plus formula works in a synergistic way but also has a pro-inflammatory action with anti-inflammatory effects. The ProflamAid Plus contains a group of 5 nutrients with medicinal action which are found in Nature, these nutrients are amino acids, trace elements, vitamins, herbs and mineral tissue salts.
This is not Herbal Medicine however herb extracts are used in natural therapy formulas.
Natural Therapy Formulas means the use of natural substances and no synthetic chemical substances are used.

The effect is long lasting and not only treats or manages the complaint but also the whole body by supporting the immune system, overall health and wellbeing. When the right kind of nutrients are used together this increases the bio-availability and increases the effect, but these nutrients must be chosen wisely and not be shown to have any contraindications either on their own or together with other nutrients. Natural therapy has proven to be a very safe way to treat and has a very long track record, having been used in humans for hundreds of years.

To be scientifically accurate, the ProflamAid plus has a positive PRO inflammatory action but also contains anti-inflammatory properties which are naturally produced in sharp contrast to using an anti-inflammatory drug. Pharmaceutically, an anti-inflammatory drug blocks the inflammatory healing symptoms, by suppressing prostaglandins and leukotrienes, the body's own chemicals which bring about inflammation as a response to injury, infection and allergens.

The healing process of inflammation, (pain, swelling, fever, redness and loss of function) is necessary, but becomes a problem when it is prolonged and ineffectual. ProflamAid Plus does NOT block the natural healing process, but rather accelerates, facilitates and shortens the inflammatory process. ProflamAid Plus have a pro-inflammatory action by providing the boosted levels of those natural minerals and vitamins, which are already, present in the inflamed tissues, but often at insufficient levels to afford rapid healing.

It is important to note that the ProflamAid Plus not interfere with the transmission of normal pain messages, thus the defence mechanism of the body is not compromised. Chronic pain leads to a reduction of endorphin levels in the cerebrospinal fluid and serum. The ProflamAid Plus has the ability to restore endorphin levels to normal.
Inflammation
The immune system is the body's defence system against infection and disease. The system sends specialized cells to locate, mark, and destroy harmful substances called antigens (such as bacteria, viruses, poisons) that can cause disease and infection.
Inflammation, which is also known as an inflammatory response, is one of the ways the immune system responds to the presence of antigens. Essentially, it means that the immune system (specifically white blood cells) has produced certain disease-fighting chemicals and sent them to the areas of the body affected by the antigens. The chemicals fight the antigens, but also cause the redness, swelling, and pain that we recognize as symptoms of inflammation.
Inflammation is normally acute; that is, it begins as the body starts to fight the antigens and ends when the fight is won and the immune system stops producing the chemicals. Chronic inflammation means the body continues to produce the chemicals that cause inflammation. The immune system is, in effect, mistakenly attacking the body's own healthy tissues and organs. This leads to autoimmune diseases, illnesses caused by the body's own defense system.
There are many types of autoimmune diseases. They may not be able to be cured, but they can be treated and their symptoms reduced and controlled.

Side Effects
Unlike non-steroidal antiinflammatory drugs, the ProflamAid Plus is totally natural and has no adverse effects if used for a long period of time. Antiinflammatory drugs commonly used in the human market are effective in suppressing the symptoms of acute inflammation, but often abort the healing process mid-stream. This in effect can cause the inflammation to continue, but with less energy so the condition can then become chronic when the anti-inflammatory is withdrawn. Anti-inflammatories are undeniably helpful with short-term use, but become toxic with extended use in chronic cases. ProflamAid and ProflamAid Plus is a natural therapy formula and work in a synergistic way. We have discovered that by utilising the action of many nutrients together the effect is higher and long lasting.

Some of the Organic Herb Extracts used are Yan Hu Suo 10:1 extract, Ruta graveolins 10:1 extract, Curcuma longa (Turmeric) 100:1 extract,Rosa canina (Rosehips) 7:1 extract, Peppermint 10:1 extract

The mineral Tissue Salts used re-establish balance.
Don't get mineral tissue salts confused with crude minerals. Biochemical tissue salts, or cell salts, are mineral salts that exist in the cells and play a critical role in cellular metabolism. The salts are administered clinically in very small doses and are prepared in a way like homeopathic remedies.
The mineral salts used are calcium phosphate, magnesium phosphate, potassium phosphate, potassium chloride, sodium sulphate, sodium phosphate, calcium sulphate, iron phosphate, zinc sulphate and silica.

The supporting higher levels vitamins included are vitamin B3, vitamin B5, vitamin B6, vitamin C and vitamin E.

Dose rates (maintenance):
300kg pony: 8g (½ large level scoops)
500kg horse: 12g (¾ large level scoop)
600+kg horse: 16g (1 large level scoop)
For specific problems, dose rate may be safely increased normally to 48g.
Feeding Instructions:
Mix well into slightly damp feed
Contact Hi Form for for further information

Please see next page for references

References

DL-phenylalanine markedly potentiates opiate analgesia – an example of nutrient/pharmaceutical up-regulation of the endogenous analgesia system A.L. Russella, M.F. McCarty Brampton Pain Clinic, Bramalea, Ontario, Canada Pantox Laboratories, San Diego, CA, USA

Corydalis Zhongguo Zhong Yao Za Zhi. 2012 Nov;37(22):3457-61.[Study on acting mechanism of anti-morphine conditioned place preference between aqueous extract of Corydalis yanhusuo and L-THP and comparison of their effects].Luo SY, Guo P, Qian G, Yang ML, Lin X, Yang PR.
Source Department of Cell Biology and Genetics, Zunyi Medical College, Zunyi 563099, China. swx_100@163.com
CONCLUSION: Both C. yanhusuo and L-THP can substantially inhibit the effect of morphine CPP, reduce the increasing glutamic acid content in VTA-NAc-PFC neuroanatomical circuit and down-regulated NR2B expression, which may be one of mechanisms on reducing the effect of morphine CPP. C. yanhusuo preparations containing L-THP (1 x) showed 24-fold effect of L-THP monomer of single application in terms of the behaviouristics of inhibitory effect on CPP as well as the similarity in terms of transmitter glutamic acid of in VTA-NAc-PFC neuroanatomical circuit and pharmacological mechanism of NR2B.
J Pharm Pharmacol. 2007 Aug;59(8):1159-65.Salutary effects of Corydalis yanhusuo extract on cardiac hypertrophy due to pressure overload in rats. Wen C, Wu L, Ling H, Li L. Source: Zhejiang Traditional Chinese Medical University, Binwen Road, Binjiang District, Hangzhou 310053, PR China.
l-Tetrahydropalmatine, an active component of Corydalis yanhusuo W.T. Wang, protects against myocardial ischaemia-reperfusion injury in rats.
Han Y, Zhang W, Tang Y, Bai W, Yang F, Xie L, Li X, Zhou S, Pan S, Chen Q, Ferro A, Ji Y.
Source: Department of Geriatrics, the First Affiliated Hospital of Nanjing Medical University, Nanjing, China.
[Analgesic effect of Corydalis yanhusuo in a rat model of trigeminal neuropathic pain].Huang JY, Fang M, Li YJ, Ma YQ, Cai XH. Source: Department of Stomatology, Zhujiang Hospital, Southern Medical University, Guangzhou 510282, China cxiaohui12@126.com

Anticancer Res. 2011 Jan;31(1):233-41.
Ruta graveolens extract induces DNA damage pathways and blocks Akt activation to inhibit cancer cell proliferation and survival. Fadlalla K, Watson A, Yehualaeshet T, Turner T, Samuel T.
Source:Department of Pathobiology, Center for Cancer Research, Tuskegee, AL 36088, USA. Ruta graveolens is a medicinal herb that has been used for centuries against various ailments. This study examined the anticancer properties of the herb using cancer cell lines.
CONCLUSION: R. graveolens extract contains bioactive compounds which, independently of known photo activatable mechanisms, potently inhibit cancer cell proliferation and survival through multiple targets.

Phytochemical Composition and Antioxidant Potential of Ruta graveolens L. In Vitro Culture LinesRenuka Diwan, Amit Shinde, and Nutan MalpathakDepartment of Botany, University of Pune, Pune Maharashtra 411007, India Received 20 July 2011; Accepted 14 January 2012

Safety and efficacy of Curcuma longa extract in the treatment of painful knee osteoarthritis: a randomized placebo-controlled trial.
Madhu K1, Chanda K, Saji MJ.
Author information
Abstract
Curcuma longa Linn. is widely used for the treatment of disorders associated with inflammation and was evaluated for its safety and efficacy in the treatment of painful knee osteoarthritis (OA). This was a randomized, single blind, placebo-controlled trial. Total of 120 patients (37 males and 83 females) with primary knee OA received either placebo (400 mg twice daily) or NR-INF-02 (500 mg twice daily) or glucosamine sulphate (GS) (750 mg twice daily) alone or combination of NR-INF-02 and GS for 42 days. The efficacy was assessed during treatment period, on day 21 and day 42. The decrease in severity of pain symptom and function of affected knee as primary efficacy outcome measure was assessed by Visual Analog Scale (VAS) and Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scale, respectively. The clinical examination of affected joint was measured by an orthopaedic specialist and using a Clinician Global Impression Change (CGIC) scale. The analysis of post-treatment scores following administration of NR-INF-02 using VAS, WOMAC, and CGIC at each clinical visit showed significant decrease ($p < 0.05$) compared to placebo. NR-INF-02 treated group showed a significant ($p < 0.01$) decrease in use of rescue medication, along with clinical and subjective improvement compared to placebo. The tolerability and acceptability profile of NR-INF-02 was better during the trial period. The study demonstrates safety and efficacy of NR-INF-02 as a useful treatment option for patients with primary painful knee OA.
Anti-inflammatory Properties of Curcumin, a Major Constituent of Curcuma longa: A Review of Preclinical and Clinical Research.
Source: Alternative Medicine Review . Jun2009, Vol. 14 Issue 2, p141-153. 13p.
Author(s): Jurenka, Julie S.
Abstract: Curcuma longa (turmeric) has a long history of use in Ayurvedic medicine as a treatment for inflammatory conditions. Turmeric constituents include the three curcuminoids: curcumin (diferuloylmethane; the primary constituent and the one responsible for its vibrant yellow color), demethoxycurcumin, and bisdemethoxycurcumin, as well as volatile oils (tumerone, atlantone, and zingiberone), sugars, proteins, and resins. While numerous pharmacological activities, including antioxidant and antimicrobial properties, have been attributed to curcumin, this article focuses on curcumin's anti-inflammatory properties and its use for inflammatory conditions. Curcumin's effect on cancer (from an anti-inflammatory perspective) will also be discussed; however, an exhaustive review of its many anticancer mechanisms is outside the scope of this article. Research has shown curcumin to be a highly pleiotropic molecule capable of interacting with numerous molecular targets involved in inflammation. Based on early cell culture and animal research, clinical trials indicate curcumin may have potential as a therapeutic agent in diseases such as inflammatory bowel disease, pancreatitis, arthritis, and chronic anterior uveitis, as well as certain types of cancer. Because of curcumin's rapid plasma clearance and conjugation, its therapeutic usefulness has been somewhat limited, leading researchers to investigate the benefits of complexing curcumin with other substances to increase systemic bioavailability. Numerous in-progress clinical trials should provide an even deeper understanding of the mechanisms and therapeutic potential of curcumin. A Randomized, Pilot Study to Assess the Efficacy and Safety of Curcumin in Patients with Active Rheumatoid Arthritis. (Phytotherapy Res. March 9, 2012)

Curcumin is known to possess potent antiinflammatory and antiarthritic properties. This pilot clinical study evaluated the safety and effectiveness of curcumin alone, and in combination with diclofenac sodium in patients with active rheumatoid arthritis (RA). Forty-five patients diagnosed with RA were randomized into three groups with patients receiving Curcumin BCM-95 (500 mg) and diclofenac sodium (50 mg) alone or their combination. The primary endpoints were reduction in Disease Activity Score (DAS) 28. The secondary endpoints included American College of Rheumatology (ACR) criteria for reduction in tenderness and swelling of joint scores. Patients in all three treatment groups showed statistically significant changes in their DAS scores. Interestingly, the Curcumin group showed the highest percentage of improvement in overall DAS and ACR scores (ACR 20, 50 and 70) and these scores were significantly better than the patients in the diclofenac sodium group. More importantly, curcumin treatment was found to be safe and did not relate with any adverse events. The study provides the first evidence for the safety and superiority of curcumin treatment in patients with active RA, and highlights the need for future large-scale trials to validate these findings in patients with RA and other arthritic conditions.

Therapeutic activities of rosehip

In contrast to nonsteroidal anti-inflammatory drugs (NSAIDs) and aspirin, rosehip has anti-inflammatory actions that do not have ulcerogenic effects and do not inhibit platelets or influence the coagulation cascade or fibrinolysis,22 thereby avoiding potential side effects for patients who may be at increased risk from the gastrointestinal or cardiovascular side effects of NSAIDs.19

Antidiabetic, lipid lowering and anti-obesogenic activity

Rosehip has been used as a traditional treatment for diabetes and has recently been found to possess hypoglycemic effects in diabetic rats.23 Similarly, rosehip extract has been reported to significantly reduce blood glucose levels after glucose loading, as well as substantially inhibiting weight gain and/or accumulation of visceral fat without affecting food intake in mice.24 Rosehip has also been found to produce modest lowering of total cholesterol in humans.1 While these activities are promising, they await further confirmation in large human clinical trials.25

Osteoarthritis, rheumatoid arthritis and back pain

The first randomised controlled trial of rosehip involved 100 patients with painful, radiographically verified osteoarthritis of the hip or knee. These patients, some of who were end stage and awaiting joint replacement, were randomised to receive either 2.5 g standardised rosehip powder or placebo twice daily for 4 months. Results showed that in comparison with placebo, rosehip powder significantly reduced pain ($p=0.035$) with 64.6% of patients receiving rosehip reporting at least some reduction of pain. Rosehip-treated patients also experienced improved hip flexion ($p=0.033$) with no significant change observed for internal and external rotation of the hips or knee flexion.21

A second double blind, placebo controlled, crossover study involving 112 patients with osteoarthritis of the hip, knee, hand, shoulder or neck, found that compared to those receiving placebo, patients who received 5 g/day of standardised rosehip powder for 3 months experienced significant reductions in pain ($p<0.0078$) and stiffness ($p<0.0025$), as well as significant improvements in mood, wellbeing and sleep quality. Sixty-six percent of patients receiving active treatment reported improvement in pain compared to only 36% of placebo patients. Reductions in paracetamol consumption and plasma CRP along with a small but significant reduction in total cholesterol were also observed. After the treatment and placebo groups were crossed over for a further 3 months (without a washout period) no difference was seen between the two groups, suggesting that rosehip has a long duration of action with a strong carryover effect.1

A third placebo controlled, double blind crossover trial involving 94 patients aged over 35 years with osteoarthritis of the hip or knee, randomised patients to either placebo or 5 g/day or rosehip for a period of 3 months. Compared to placebo, treatment with rosehip resulted in a significant reduction in WOMAC (Western Ontario and McMaster Universities Osteoarthritis Index) pain (+/–) and consumption of 'rescue medication' after 3 weeks and significant reduction in WOMAC disability, stiffness and global assessment of severity of the disease after 3 months of treatment.28

In addition to offering benefits for patients with osteoarthritis, rosehip may offer benefits in other conditions such as back pain and rheumatoid arthritis. A 1 year surveillance of 152 patients found that rosehip provided significant pain relief for patients with acute exacerbations of chronic back pain.29 More recently, a 6 month, double blind placebo controlled trial also found modest benefits for patients with rheumatoid arthritis indicated by significantly improved scores on the Health Assessment Questionnaire Disability Index (HAQ-DI) along with various other patient and physician reported scales. The authors concluded that while the results were promising, the study was not well powered and larger studies were needed.30

A slow onset of action, modest effect size and lack of statistical power may account for the results of a more recent and much smaller open case control study of 20 female patients with rheumatoid arthritis and 10 female controls, which found no significant effects on clinical symptoms, level of CRP or laboratory measures of antioxidant enzyme activity after 4 weeks of treatment with 10.5 g/day of rosehip powder.31 Meta-analyses and systematic reviews

A meta-analysis of the three randomised controlled trials of osteoarthritis patients included 287 patients with a median treatment period of 3 months. This meta-analysis reported that treatment with patented rosehip powder consistently reduced pain scores and that patients were twice as likely to respond to rosehip (as indicated by a reduction in WOMAC pain) compared to placebo (effect size of 0.37, 95% CI: 0.13–0.60). The authors therefore concluded that rosehip powder does reduce pain and that its efficacy and safety need evaluation and independent replication in future large scale, long term trials.32

A more recent meta-analysis provides an indirect comparison of the pain reducing effect of glucosamine hydrochloride and standardised rosehip powder for osteoarthritis. This analysis, which was based on three studies on glucosamine hydrochloride involving a total of 933 patients and the three studies described above involving 287 patients, concluded that rosehip is more efficacious than glucosamine hydrochloride in reducing pain in osteoarthritis patients.33

As well as being the subject of metaanalyses, the clinical trials of rosehip have been systematically reviewed. One systematic review of two relatively small (n=100 and 112) double blind, randomised placebo controlled studies, both of which were considered to be of high quality with a Jadad score of 5 out of 5, concluded that rosehip powder had a moderate effect in patients with osteoarthritis.34 This same conclusion was also made by another systematic review that included four trials (two of which were identified as subgroup analyses).35

Summary

The growing evidence base for rosehip suggests that this traditional herbal remedy has a high safety profile. While further research is required to establish its clinical role, existing research (both in vitro and in vivo) suggests that standardised rosehip powder may offer an effective first line therapy and is a viable replacement or supplement for conventional drug therapies such as NSAIDs in osteoarthritis and possibly other inflammatory diseases.

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Milk Thistle Extract and Silymarin Inhibit Lipopolysaccharide Induced Lamellar Separation of Hoof Explants in Vitro

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External Editor: Vernon L. Tesh
Received: 28 June 2014; in revised form: 5 September 2014 / Accepted: 25 September 2014 / Published: 6 October 2014
Abstract: The pathogenesis of laminitis is not completely identified and the role of endotoxins (lipopolysaccharides, LPS) in this process remains unclear. Phytogenic substances, like milk thistle (MT) and silymarin, are known for their anti-inflammatory and antioxidant properties and might therefore have the potential to counteract endotoxin induced effects on the hoof lamellar tissue. The aim of our study was to investigate the influence of endotoxins on lamellar tissue integrity and to test if MT and silymarin are capable of inhibiting LPS-induced effects in an in vitro/ex vivo model. In preliminary tests, LPS neutralization efficiency of these phytogenics was determined in an in vitro neutralization assay. Furthermore, tissue explants gained from hooves of slaughter horses were tested for lamellar separation after incubation with different concentrations of LPS. By combined incubation of explants with LPS and either Polymyxin B (PMB; positive control), MT or silymarin, the influence of these substances on LPS-induced effects was assessed. In the in vitro neutralization assay, MT and silymarin reduced LPS concentrations by 64% and 75%, respectively, in comparison PMB reduced 98% of the LPS concentration. In hoof explants, LPS led to a concentration dependent separation. Accordantly, separation force was significantly decreased by 10 µg/mL LPS. PMB, MT and silymarin could significantly improve tissue integrity of explants incubated with 10 µg/mL LPS. This study showed that LPS had a negative influence on the structure of hoof explants in vitro. MT and silymarin reduced endotoxin activity and inhibited LPS-induced effects on the lamellar tissue. Hence, MT and silymarin might be used to support the prevention of laminitis and should be further evaluated for this application.
Keywords: horses; equine; endotoxins; laminitis; hoof explants; milk thistle; silymarin

5. Conclusions

We confirmed that LPS has a negative influence on the structure of the hoof explants in vitro, and therefore should be further screened for its contribution during the pathogenesis of laminitis. MT and silymarin were not only able to neutralize endotoxins, but also capable of reducing LPS-induced lamellar separation. Hence, MT and silymarin might be used to support the prevention of laminitis through, direct neutralization of endotoxins and inhibition of LPS induced effects on the lamellar tissue. However, further investigations on endotoxins and their contribution during development of laminitis are necessary. In addition, the mode of action of MT and silymarin on LPS neutralization should further be evaluated.

MINERAL TISSUE SALTS
Tricalcium Phosphate
Trimagnesium Phosphate
Calcium Sulphate
Ferrous Phosphate
Zinc Sulphate
Monopotassium Phosphate
Potassium Chloride
Sodium Sulphate
Monosodium Phosphate

Key Ingredients
Rue Herb extract 10:1
Yan Hu Suo extract 10:1
Peppermint Extract 10:1
Curcuma Longa Extract 100:1
Rosa Canina 7:1
Milk Thistle 10:1

VITAMINS
Vitamin B3 (Niacin)
Vitamin B5 (Pantothenic Acid)
Vitamin B6 (Pyridoxine)
Vitamin C

AMINO ACIDS

Lysine	13.333665	g/kg
Methoinine	3.075615	g/kg
Leucine	15.583116	g/kg
Isoleucine	9.841968	g/kg
Cystine	3.280656	g/kg
Phenylalanine	149.822132	g/kg
Tyrosine	7.996599	g/kg
Threonine	8.406681	g/kg
Tryptophan	2.460492	g/kg
Valine	4.305861	g/kg
Arginine	15.788157	g/kg
Histidine	1.025205	g/kg