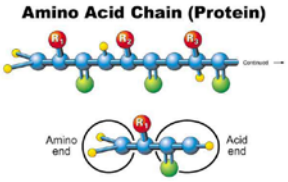








The Medicinal Action of PetArk Muscle and Joint

The Science of Natural Health

- A preventative and treatment formula
- A patented medicine combining traditional Chinese pain relieving herbs with western nutritional supporting ingredients.
- Now has added controlled doses of Rosa Canina 7:1 and Curcuma Longa 100:1 extract

- Focuses on enhancing the natural pain relief mechanisms of the body with some help from Traditional Chinese Medicines.

- 85-95% effective with over 25 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

- Provides excellent pain relief

- No Glucosamine, Chondroitin Sulphate or MSM

- Using only TGA listed ingredients with supporting data

- 100% science back

Product description:

- No chondroitin, glucosamine or MSM like most other joint supplements
- 60% stronger than standard ProflamAid
- Highly effective formula includes vitamins, minerals and herbal extracts that assist in wound healing and maintaining healthy joints

Special Ingredients:
Yan Hu Suo 10:1 extract
Ruta graveolins 10:1 extract
Phenylalanine
Curcuma longa (Turmeric) 100:1 extract
Rosa canina (Rosehips) 7:1 extract
Peppermint 10:1 extract

Tissue Salts 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 similar to homeopathic remedies. Hi Form Australia uses these mineral salts in most of their formulas, along with specific, organic herbs and herb extracts, amino acids, vitamins and trace elements.

Nutritional Analysis:

	PetArk Muscle and Joint	
MINERAL TISSUE SALTS		
Tricalcium Phosphate	29000	mg/kg
Trimagnesium Phosphate	17000	mg/kg
Monopotassium Phosphate	12000	mg/kg
Potassium Chloride	12000	mg/kg
Sodium Sulphate	12000	mg/kg
Monosodium Phosphate	12000	mg/kg
Calcium Sulphate	4000	mg/kg
Iron Phosphate	92000	mg/kg
Zinc Sulphate	28000	mg/kg
Silica	3000	mg/kg
TRACE MINERALS		
Copper	0.3168	mg/kg
Selenium	0.164494	mg/kg

Manganese	1.55699	mg/kg
Chromium	0.032296	mg/kg
Cobalt	1.39585	mg/kg
VITAMINS		
Vitamin A	1.9983621	mg/kg
Vitamin B1 (Thiamine)	1.88463	mg/kg
Vitamin B2 (Riboflavin)	0.708275	mg/kg
Vitamin B3 (Niacin)	6979.18528	mg/kg
Vitamin B5 (Pantothenic Acid)	3342.1	mg/kg
Vitamin B6 (Pyridoxine)	19856.706	mg/kg
Vitamin C	13506.1387	mg/kg
Vitamin E	2603.8492	mg/kg
AMINO ACIDS		
Phenylalanine	305.98302	g/kg

PetArk Muscle and Joint 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. Naturopathic Veterinary 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 products do not have an anti-inflammatory action, but rather a PRO inflammatory action. 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. PetArk Muscle and Joint does NOT block the natural healing process, but rather accelerates, facilitates and shortens the inflammatory process. PetArk Muscle and Joint has 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 PetArk Muscle and Joint do 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 PetArk Muscle and Joint 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.

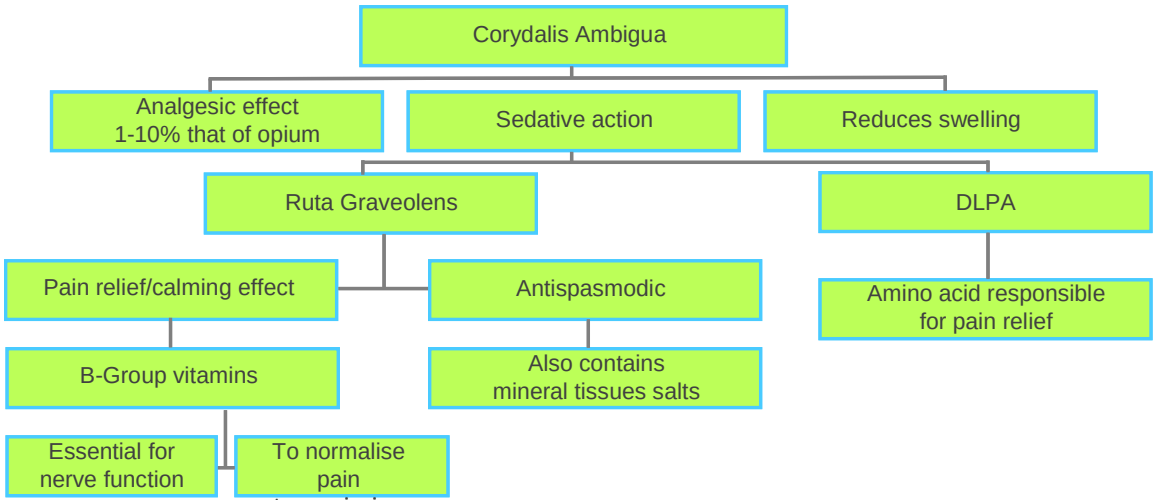
Inflammation, which is also known as an inflammatory response, is one of the ways the immune system responds to the presence of antigens. Essentially, it means that the immune system (specifically white blood cells) has produced certain disease-fighting chemicals and sent them to the areas of the body 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, PetArk Muscle and Joint is totally natural and have 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 antiinflammatory is withdrawn. Antiinflammatories are undeniably helpful with short-term use, but become toxic with extended use in chronic cases. PetArk Muscle and Joint is a natural therapy formula and works in a synergistic way. We have discovered that by utilising the action of many nutrients together the effect is higher and long lasting.



Equine Case Studies 1992-1997 based on the equine equivalent formula ProflamAid Plus

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.

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.

CASE no 5. Group studies conducted 1997

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 60 grams 3 large scoops of ProflamAid Plus 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,

7 days	Horse A %	Horse B %	Horse C%	Horse D %
Improvement	20	0	30	0
14 days	90	40	100	10
28 days	100	80	40	10

After 30 days Horse A and B were sound and the ProflamAid Plus 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 ProflamAid Plus at a dose of 60 grams 3 large scoops morning and night. Horse D was administered a dose of 80 grams 4 large scoops morning and night.
After 42 days the following results were recorded

Improvement	Horse A %	Horse B %	Horse C %	Horse D %
42 days	90	95	50	60
56 days	100	100	100	85
70 days	100	100	100	90

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

Report from Dr. Rob McNeil
15 December 2002
To whom it may concern,

Re: Hi Form ProflamAid Plus

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 longer term 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
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Staffordshire WS15 4AA UK

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DL-phenylalanine markedly potentiates opiate analgesia – an example of nutrient/pharmaceutical up-regulation of the endogenous analgesia system A.L. Russell[a], 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 photoactivatable 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 K[1], 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

Antioxidant activity

Rosehip is rich in polyphenolic compounds such as proanthocyanidins and flavonoids such as quercetin and catechin.[8] The high phenolic and flavonoid content of rosehips has been observed to correlate with antioxidant activity[10] and when rosehip extract containing these phenolics is deprived of vitamin C it still shows considerable antioxidant activity.[11] This activity includes protective effects against oxidative stress, enhanced activity of antioxidant enzymes such as

superoxide dismutase and catalase, and protective effects on gap junction intercellular communication.[12]

Anti-inflammatory activity

Rosehip has been found to have antiinflammatory and antinociceptive activities in several in vivo experimental models with synergistic interactions between compounds.[13] The anti-inflammatory power of rosehip is reported to be similar to that of indomethacin, although its mode of action is different.[14] The lipophilic constituents have been found to be particularly active with respect to antiinflammatory properties including actions on arachidonic acid metabolism and inhibition of both cyclooxygenase-1 and 2.[10] Much of the anti-inflammatory action of rosehip has been attributed to high quantities of galactolipids, a class of compounds recently shown to possess antitumour promoting and anti-inflammatory activity, both in vitro and in vivo.[4] Rosehip and its constituent galactolipids have also been found to inhibit the production of inflammatory mediators and confer chondroprotective effects in vitro.[15]

A particular galactolipid – GOPO® – has been shown to be the active principle responsible for the observed in vitro inhibition of chemotaxis and chemiluminescence of human peripheral blood leucocytes without any toxicity to the cells.[16–19] This suggests GOPO® is important for the clinically observed anti-inflammatory properties of standardised rosehip powder, which include reduced serum c-reactive protein (CRP) and creatinine levels in patients with osteoarthritis and healthy subjects,[18,20] as well as improved pain and joint movement in osteoarthritis patients.[1,21]

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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