



## *Your Monthly Update*

*Dear Colleague*

Welcome to the February 2010 newsletter from Pure Bio Ltd.

### *Did you know:*

New research is indicating that CoQ10 supplementation may fight Parkinson's Disease, rather than simply masking the symptoms as current prescription drugs do. The study has found low levels of coenzyme Q10 in Parkinson's sufferers; as well as evidence that it can protect the area of the brain damaged by the disease.

The chosen topic for this month is:

## **Rheumatoid Arthritis (RA)**

### **Protocol Summary**

<b>Ranking</b>	<b>Nutritional Supplements</b>	<b>Botanical Medicine</b>
<b>Primary</b>	Borage oil Fish oil (EPA/DHA) Vitamin E	
<b>Secondary</b>	Cetyl myristoleate DMSO Evening primrose oil Green-lipped mussel Pantothenic acid (vitamin B5) Propolis (topical) Selenium Zinc	Boswellia Cat's claw Cayenne (topical) Devil's claw Turmeric
<b>Other</b>	Boron Bromelain	Cajeput oil (topical) Camphor oil

	<p>Copper Glucosamine hydrochloride</p>	<p>Chaparral (topical) Eucalyptus oil (topical) Fir needle oil (topical) Ginger Pine needle oil (topical) Rosemary oil (topical) Willow Yucca</p>
<p><b>Primary</b> – Reliable and relatively consistent scientific data showing a substantial health benefit.</p> <p><b>Secondary</b> – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.</p> <p><b>Other</b> – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.</p>		

## Symptoms

Rheumatoid arthritis (RA) is a destructive form of arthritis where the inflammation can cause crippling pain and deformation of joints at an early age. It is characterized by early morning joint stiffness, and pain and inflammation in symmetrically located joints. The fingers and toes are usually the first to be affected, though it is not uncommon for pains to wander from joint to joint throughout the body. The wrists, ankles, knees and spine are other vulnerable areas. In addition to the joint symptoms, flare-ups can cause pronounced fatigue, low-grade fevers, poor appetite and weight loss.

Initial symptoms for rheumatoid arthritis are most common in women between the ages of twenty-five and fifty. However, it can affect anyone, including children and degrees vary widely. In some cases, attacks disappear never to recur again. In others, flare-ups last a long time and recur frequently, causing a rapid destruction and crippling of the joints. Various organs, including the heart, lungs and eyes are also affected by this illness. Variations on rheumatoid arthritis include ankylosing spondylitis, Reiter's syndrome and psoriatic arthritis, which is a combination of arthritis and psoriasis. Rheumatoid arthritis has also been known to occur with colitis.

## Causes

Rheumatoid arthritis is an autoimmune disease, in which the body attacks its own tissues as a result of a defective reaction of the immune system. Emotional stress and viral infections are common triggers for an attack. RA carries a genetic tendency.

## Dietary Modification

There would appear to be a definite effect of diet on rheumatoid arthritis. The typical Western diet, high in proteins and saturated fats, often aggravates the condition and individual sensitivities to certain foods should be established. A

vegetarian diet is often beneficial for arthritis sufferers. Food allergies and a sensitivity to environmental toxins are problems in individual arthritis cases. Common triggers include alcohol, cigarettes and coffee. Drinking four or more cups of coffee per day has been associated with an increased risk of developing rheumatoid arthritis in preliminary research.

Food sensitivities develop when pieces of intact protein in food are able to cross through the intestinal barrier. Many patients with RA have been noted to have increased intestinal permeability, especially when experiencing symptoms. In many people, RA worsens when they eat foods to which they are allergic or sensitive and improves by avoiding these foods. In one study, the vast majority of RA patients had elevated levels of antibodies to milk, wheat, or both; suggesting a high incidence of allergy to these substances. Researchers have reported that one-third of people with RA may be able to control their disease completely through allergy elimination. Identification and elimination of symptom-triggering foods should be done with the help of a practitioner.

Feeding a high-fat diet to animals susceptible to autoimmune disease has increased the severity of RA. People with RA have been reported to eat more fat, particularly animal fat, than those without RA.

Preliminary evidence suggests that consumption of olive oil, rich in oleic acid, may **decrease** the risk of developing RA. One trial in which people with RA received either fish oil or olive oil, found that olive oil capsules providing 6.8 grams of oleic acid per day for 24 weeks produced modest clinical improvement and beneficial changes in immune function.

Fasting has been shown to improve both signs and symptoms of RA, but most people have relapsed after the returning to a standard diet. When fasting was followed by a 12-month vegetarian diet, however, the benefits of fasting appeared to persist. It is not known why the combination of these dietary programs (i.e., fasting followed by a vegetarian diet) might be helpful.

Excess weight, which puts undue strain on the joints, plays an obvious part in the symptom picture of RA.

A diet high in raw fruits and vegetables is generally beneficial as it is low in protein and calories; but rich in the nutrients needed for rebuilding and repair. Vegetables and fruits are also beneficial for sufferers of RA because they produce an alkaline environment in the body. (Animal products and grains burn to acid ash.) Cherries, raspberries and chestnuts are particularly good sources of alkaline minerals. Trace amounts of boron - found in cereals, pears and apples - promote healthy bones. Dark green, leafy vegetables provide vitamins E and C which work together to maintain and build cartilage. These vitamins also act as antioxidants, which limit free-radical reactions partly responsible for arthritic inflammation. The silica found in alfalfa sprouts, lettuce and cabbage has been shown to help alleviate arthritis.

The beneficial effects of unrefined, cold-pressed vegetable oils such as flax seed, pumpkin seed and walnut oil cannot be overemphasized. The essential omega-3 alpha-linolenic and omega-6 linoleic fatty acids lubricate the joints and help generate and deposit bone material. Also, they prevent the absorption of toxins and food

allergens into the body - an important underlying cause of arthritis - by stimulating digestion.

Ginger has been found helpful in the treatment of arthritis because of its enzyme content. Avoiding vegetables of the nightshade family, for instance green peppers, eggplants, potatoes and tomatoes relieves arthritic suffering. They contain solanine which interferes with enzymatic action in the muscles, causing pain.

High histamine-containing foods may also aggravate RA as they increase a pro-inflammatory state and exacerbate joint pain and swelling.

## **Lifestyle Modification**

Although exercise may initially increase pain, gentle exercises help people with RA. Sufferers can safely participate in a weight-bearing exercise program with many positive effects on physical function; activity and fitness levels; and bone mineral density, but without aggravating activity of the disease. Many practitioners recommend swimming, stretching, or walking as ideal forms of exercise for people with RA.

## **Nutritional Supplement Treatment Options**

People with RA have been reported to have an impaired antioxidant system, making them more susceptible to free radical damage. [Vitamin E](#) is an important antioxidant, protecting many tissues, including joints, against oxidative damage. Low vitamin E levels in the joint fluid of people with RA have been reported. In a double-blind trial, approximately 1,800 IU per day of vitamin E was found to reduce pain from RA. Two other double-blind trials (using similar high levels of vitamin E) reported that vitamin E had approximately the same effectiveness in reducing symptoms of RA as anti-inflammatory drugs. In other double-blind trials, 600 IU of vitamin E BID was significantly more effective than placebo in reducing RA, although laboratory measures of inflammation remained unchanged.

Oils containing the omega-6 fatty acid gamma linolenic acid (GLA)—[borage oil](#), [black currant seed oil](#), and [evening primrose oil \(EPO\)](#)—have been reported to be effective in the treatment for people with RA. (The best effects have been reported with use of borage oil). In a double-blind trial, positive results were seen when EPO was used in combination with fish oil ([EPA/DHA](#)). GLA appears to be effective because it is converted in part to prostaglandin E1, a hormone-like substance known to have anti-inflammatory activity.

Many double-blind trials have proven that [EPA and DHA](#) partially relieve symptoms of RA. The effect results from the anti-inflammatory activity of fish oil. Many practitioners recommend 3 grams per day of EPA and DHA, an amount commonly found in 10 grams of fish oil. Positive results can take three months to become evident. In contrast, a double-blind trial found flaxseed oil (a source of another form of omega-3 fatty acid) not to be effective for RA patients.

[Cetyl myristoleate \(CMO\)](#) has been proposed to act as a joint “lubricant” and anti-inflammatory agent. In a double-blind trial, people with various types of arthritis that had failed to respond to non-steroidal anti-inflammatory drugs received either CMO

(540 mg per day orally for 30 days) or a placebo. These people also applied CMO or placebo topically, according to their perceived need. Sixty-four percent of those receiving CMO improved, compared with 14% of those receiving placebo.

There is some preliminary evidence that [dimethyl sulfoxide \(DMSO\)](#), when applied to the skin, has anti-inflammatory properties and alleviates pain, such as that associated with RA. DMSO appears to reduce pain by inhibiting the transmission of pain messages by nerves. It comes in different strengths and degrees of purity, and certain precautions must be taken when applying DMSO. For these reasons, DMSO should be used only under the supervision of a practitioner.

Research suggests that people with RA may be partially deficient in [pantothenic acid](#) (vitamin B5). In one placebo-controlled trial, those with RA had less morning stiffness, disability and pain when they took 2,000 mg of pantothenic acid per day for two months.

Supplementation with New Zealand [green-lipped mussel \(\*Perna canaliculus\*\)](#) significantly improved RA symptoms in 68% of participants in a double-blind trial. In a recent double-blind trial, use of green-lipped mussel as a lipid extract (210 mg per day) or a freeze-dried powder (1,150 mg per day) for three months led to a decrease in joint tenderness and morning stiffness, and to better overall function. However, members of the Australian Rheumatism Association have reported side effects, such as stomach upset, gout, and skin rashes, occurring in people taking certain New Zealand green-lipped mussel extracts.

Deficient [zinc](#) levels have been reported in people with RA. Trials suggest that zinc might only help those who are zinc-deficient.

People with RA have been found to have lower [selenium](#) levels than healthy people. A double-blind trial using 200 mcg of selenium per day for three to six months found that selenium supplementation led to a significant reduction in pain and joint inflammation in RA patients.

[Copper](#) acts as an anti-inflammatory agent needed to activate superoxide dismutase (SOD), an enzyme that protects joints from inflammation. People with RA tend toward copper deficiency and copper supplementation has been shown to increase SOD levels in humans. Several copper compounds have been used successfully in treating people with RA, and a controlled trial using copper bracelets reported surprisingly effective results compared with the effect of placebo bracelets.

[Boron](#) supplementation at 3–9 mg per day may be beneficial, particularly in treating people with juvenile RA, according to very preliminary research.

In a preliminary trial, supplementation with [glucosamine hydrochloride](#) (1,500 mg per day) for 12 weeks produced a small but statistically significant improvement of pain in people with rheumatoid arthritis. However, other measures of disease activity, such as the number of swollen and painful joints did not improve.

[Bromelain](#) has significant anti-inflammatory activity and improves the health of connective tissues surrounding the joints. It also supports vitamin C function.

[Propolis](#) is the resinous substance collected by bees from the leaf buds and bark of trees, especially poplar and conifer trees. Anti-inflammatory effects from topical application of propolis extract have been noted in one animal study, and a preliminary controlled trial found that patients with RA treated with topical propolis extract (amount and duration not noted) had greater improvements in symptoms compared to placebo.

## Botanical Treatment Options

[Boswellia](#) is an herb used in Ayurvedic medicine to treat arthritis. Boswellia has reduced symptoms of RA in most reports. Recommended dosage is 400–800 mg of gum resin extract in capsules or tablets TDS.

In a double-blind trial, supplementation with an extract from [cat's claw \(\*Uncaria tomentosa\*\)](#) for 24 weeks was significantly more effective than a placebo in reducing the number of painful joints in patients with rheumatoid arthritis. The amount used was 20 mg of extract TDS. A key factor is to use a source of devil's claw that contains pentacyclic oxindole alkaloids - compounds that appear to influence the activity of the immune system; but has been purified to be free of tetracyclic oxindole alkaloids, which may inhibit the beneficial effects of the other alkaloids.

A cream containing small amounts of [capsaicin](#), a substance found in cayenne pepper, can help relieve pain when rubbed onto arthritic joints, according to the results of a double-blind trial. Capsaicin achieves this effect by depleting nerves of the pain-mediating neurotransmitter, substance P. Although application of capsaicin cream initially causes a burning feeling, the burning lessens with each application and disappears for most people in a few days. Creams containing 0.025–0.075% of capsaicin are available and may be applied to the affected joints three to five times a day. A practitioner should supervise this treatment.

[Devil's claw](#) has anti-inflammatory and analgesic actions; and dispels uric acid. A typical amount used is 800 mg of encapsulated extracts TDS; powder at a dose of 4.5–10 grams per day; or tincture equivalent.

The active constituent of turmeric, [curcumin](#), is a potent anti-inflammatory compound that protects the body against free radical damage. A double-blind trial found curcumin to be an effective anti-inflammatory agent in RA patients. The amount of curcumin usually used is 400 mg TDS.

[Ginger](#) is another Ayurvedic herb used to treat people with arthritis. A small number of case studies suggest that taking 6–50 grams of fresh or powdered ginger per day may reduce the symptoms of RA.

[Yucca](#), a traditional remedy, is a desert plant that contains soap-like components known as saponins. Yucca tea (7 or 8 grams of the root simmered in a pint of water for 15 minutes) is often drunk for symptom relief three to five times per day.

Although [willow](#) is slow acting as a pain reliever, the effect is thought to last longer than the effect of willow's synthetic cousin, aspirin. Some experts suggest that willow may be taken one to four weeks before results are noted.

Topical applications of several botanical oils are approved by the German government for relieving symptoms of RA. These include primarily [cajaput \(\*Melaleuca leucodendra\*\) oil](#), [camphor oil](#), [eucalyptus oil](#), [fir \(\*Abies alba\* and \*Picea abies\*\) needle oil](#), [pine \(\*Pinus spp.\*\) needle oil](#), and [rosemary oil](#). A few drops of oil or more can be applied to painful joints several times a day as required. Juniper oil can also be used topically to reduce inflammation.

### Acute joint inflammation (for acute flare-up):

- In the acute, inflamed stage, slowly start with movement exercises and hot, moist fenugreek packs on the painful areas. Take 1 tbsp. fenugreek seeds internally three times daily.
- For internal 10-day cleansing and to reduce inflammation, drink willow bark tea. Add 1 tsp. willow bark to 1 cup boiling water, steep for ten minutes, strain and drink unsweetened twice daily.
- Take a hayflower bath. Combine wild yam with celery seeds or willow leaves and make an infusion, strain and add to bath water.

### Homeopathy

Use the 6c strength, 2 tablets under the tongue three times daily, until improvement is noticeable, or for up to two weeks.

- **Rhus toxicodendron** is a popular arthritis remedy, when a great deal of stiffness occurs upon first rising. During motion, the pain is less and restlessness and constant movement are typical. Cold, wet weather aggravates an attack, while heat improves the pain.
- In just the opposite instance, **Bryonia** should be used. The pain is worst with any degree of motion and can only be relieved by absolute rest and applying cold packs. The joint is very tender to touch and the person is typically irritable on account of the pain.
- **Apis** is to be considered if the affected joints are quite swollen, red and hot, and better from cold wraps.
- Use **Dulcamara** when the marked pain and stiffness are brought on by cold, damp weather or after getting wet and chilled.

### Tissue Salts

Take 4 tablets under the tongue three times daily, or hourly if the pain is acute.

- Use **Ferr phos** in the beginning stage or when the inflammation is at its height. Pain on movement is accompanied by stiffness and possibly fever.
- **Nat phos** will restore balance if the body is too acidic, noticeable if perspiration is sour or if the tongue is coated a creamy yellow.
- **Kali sulph** is more likely to help a wandering arthritis. Symptoms tend to be worse in warm, stuffy rooms.
- **Calc phos** is useful when fatigue is present and the joints feel cold and numb. Drafts, motion and weather changes adversely affect the joints.
- **Calc fluor** helps with gouty enlargements of the finger joints.

## **Integrative Options**

- Gentle spinal manipulation to decrease tenderness in the spinal areas and articulation of the peripheral joints by an osteopath or chiropractor can bring palliative relief.
- Exercise during the non-active flare-ups improves mobility and circulation; and decreases pain. Swimming and water exercises are excellent sports because the water lends support to the joints during exercise.
- Massaging around the painful area will improve circulation and reduce swelling and pain. Use a little calendula cream or St. John's wort oil and lightly stroke the muscles and fascia around the joints in the direction of the heart, using fingertips.
- Wash painful areas with apple cider vinegar water. Mix 1 part apple cider vinegar to 6 parts water.
- Castor oil packs applied to the affected area and left on for a minimum of half an hour (up to overnight) reduces pain and swelling of the joint.

### ***To retain heat for longer periods:***

- Heat coarse salt in a frying pan (no oil), put in cotton cloth and place warm on the painful area.
- Mix three boiled potatoes (in skin) with 2 tbsp. bran. Place on joints for fifteen minutes.
- Cornmeal porridge is excellent as a poultice since it remains hot for a long time. Apply as hot as you can bear it.
- Mix clay with hot water to make a thick paste and place on the painful area for thirty minutes.

### ***Other Suggestions:***

- At night use a linen comforter (duvet) cover filled with equal parts of dried thyme, hyssop, sage and rue.
- Persons suffering from arthritic conditions should not sleep in feather beds. Feathers do not breathe, and retain dampness. Sheep fleece is excellent to line the mattress and sheep wool is recommended for comforters. Wear fleece-lined (sheepskin) slippers to fend off dampness.

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