

ANTI-INFLAMMATORIES

The four classic signs of inflammation are redness, swelling, heat and pain in a damaged area. NSAIDs (Non-Steroidal Anti-Inflammatory Drugs) and natural antiinflammatory agents taken at the time of injury/damage do not necessarily promote healing, but lessen the signs of inflammation.

Whether occurring through athletics or during illness, inflammation is a natural body process that stimulates tissue growth and healing. The primary purpose of inflammation is to restore damaged tissue via blood flow and immune cell transport.

The necessary components of healthy tissue growth and repair are: · Immediate inflammation upon

- tissue damage.
- · Swift repair of the damage via

immune cells and then:

· Retreat and removal of inflammatory mediators, so recovery is possible.

All three stages are crucial for healthy cells. Problems arise when the initial inflammation is extended. over-reacting or unable to contain damage.

In these cases, initial inflammation can cause secondary or chronic inflammation. This type of Inflammation is a sign of continual damage or an inability to remove inflammatory mediators.

Anti-inflammatory agents, when used appropriately, can assist in the third stage of tissue healing; post repair, retreat and recovery.

References cited by IMPACT Magazine's Natural Health Products experts are published online at impactmagazine.ca.

This chapter of the IMPACT Magazine Guide to Natural Health Products is compiled with the expert assistance of naturopathic doctors Thara Vayali, Rob Roth and Melina Roberts.

BOSWELLIA SERRATA

What it is: Indian Frankincense. The resin from the bark of this large branching tree is used

medicinally.

What it does: Blocks lipoxygenase enzymes in the inflammation pathway, which reduces inflammation.

Why you might need it: To treat inflammatory bowel disease, rheumatoid arthritis, osteoarthritis, asthma.

Who shouldn't use this: No studies have evaluated contraindications.

What happens if you take too much: No toxicity found at doses of 1000mg/kg. Not studied in pregnancy, lactation, children or kidney/liver disease.

Where to get it: As a topical essential oil spray, Boswellia has shown to be as effective as Diclofenac (a topical anti-inflammatory cream). Orally, studies have shown compounds with 40-60 per cent boswellic acids have the best effects on inflammation. IMPACT Expert Picks: AOR Boswellia.

BROMELAIN



What it is: A group of protein-degrading enzymes from the pineapple plant, though its anti-inflammatory

actions seem to be based around enzyme inhibition.

What it does: Inhibits one of the primary initiators of inflammation, Bradykinin, which is also involved in clotting.

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Why you might need it: To cope with protein maldigestion, bruises, hematomas.

Who shouldn't use this: Individuals on medications that depend on the cytochrome p450 CYP 2C9 enzyme. Caution if taking blood thinners.

What happens if you take too much: If eaten in excess, can numb the tongue. Allergenic potential, caution on first time consuming as supplement.

Where to get it: Pineapple, the stem/ core (which is the fruit) has the highest concentration of bromelain.

IMPACT Expert Picks: New Roots Ultimate Bromelain, Genestra Biozymes.



MAGNESIUM GEL (TOPICAL) OR MINERAL COMPLEXES WITH MAGNESIUM (ORAL)

What it is: Magnesium is a mineral available in topical gel or ointment or oral form.

What it does: Muscle relaxant.

Why you might need it: A topical magnesium product can be used to treat sore or tight muscles due to injury or overuse. Topical magnesium can also be applied to muscles in the upper back when headaches are the result of muscle tension. The effect of topical magnesium can be improved by having it applied with therapeutic ultrasound (known as phonophoresis) or iontophoresis. Ask your naturopathic doctor, physiotherapist or chiropractor if they perform such therapies. Oral magnesium in silicate mineral complexes from the Sierra Mountains has been shown to down regulate certain inflammatory pathways, thus reducing muscle aches or joint pain. Who shouldn't use this: No known concerns unless there is an allergen within the gel or ointment. People on diuretics, other heart medication or antibiotics should consult with a

health care provider before using oral supplement. What happens if you take too much: No known toxicity concerns for topical gel; for oral supplement, diarrhea, cramps and nausea are possible if you take too much (typically above 1g per day).

Where to get it: Topical — An integrated pharmacy or your local pharmacy may also carry this medicine. Oral — at leading natural health food stores and some pharmacies.

IMPACT Expert Picks: Topical — Ancient Minerals Magnesium Gel; Metagenics Acute Phase; custom compounded from Cambrian Pharmacy, Kenron Pharmacy or another compounding pharmacy. Oral — SierraSil Joint Formula14.

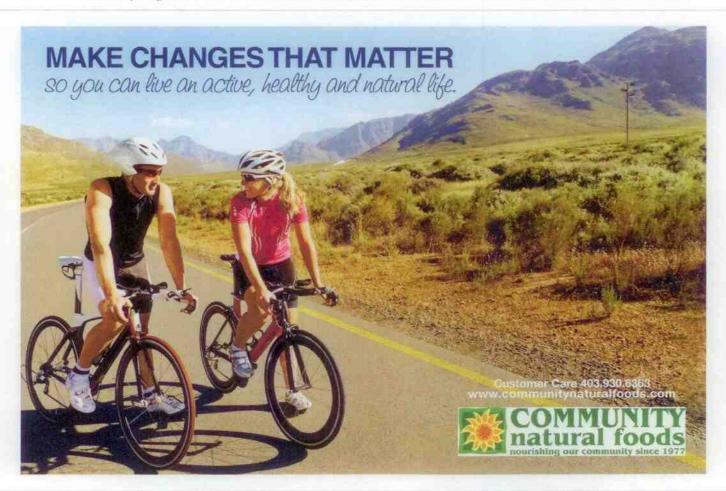
PAIN REDUCERS AND MUSCLE RELAXANTS

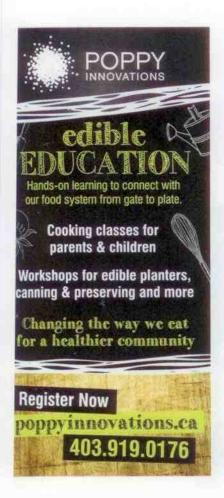


PIPER METHYSTICUM (KAVA KAVA)

What it is: Kava kava is a tall scrub that grows in the islands of the Pacific

Ocean. It is a member of the pepper family. It has been used for thousands of years for







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What it does: The active constituent
kava-lactones has a variety of central nervous
system effects, including anxiolytic, sedative,
anticonvulsant, local anesthetic, spasmolytic
and analgesic activities. It enhances
mental awareness, alertness, acuity and
concentration. It alleviates muscle cramps

Why you might need it: Kava kava can be beneficial for anxiety disorders, stress, insomnia and restlessness.

and aches.

Who shouldn't use this: Individuals with liver disease. Kava kava has potential dangers of liver toxicity including hepatitis, cirrhosis and liver failure. Take only under the supervision of a health care professional qualified in botanical medicine. It should not be taken by children or pregnant or breastfeeding women.

What happens if you take too much: Kava kava was banned by Health Canada from 2002 to 2012 due to risk of liver toxicity. It can cause gastrointestinal complaints, headaches, dizziness, enlarged pupils and, rarely, allergic skin reactions. Professional guidance and caution should be exercised with kava kava, but recent research has shown kava kava is nearly 10 times safer than ASA.

Where to get it: The root of the plant is used medicinally. Typically comes as a tincture, tea or capsule.

IMPACT Expert Picks: Botanica Kava Kava Phytocaps.



SALIX NIGRA/ALBA (WILLOW BARK)

What it is: A botanical medicine derived from the bark of the willow tree.

Salicin, one of the active constituents, is converted to salicylic acid in the digestive tract and provides analgesic benefits.

What it does: This medicine acts similarly to ASA. It is an analgesic (pain medication), anti-inflammatory, antirheumatic and helps reduce high fevers.

Why you might need it: To aid in the relief of joint pain (e.g. osteoarthritis, rheumatoid arthritis), gout, fever, low back pain, headache, and dysmenorrhea in females. Who shouldn't use this: Caution should be exercised and consultation with a doctor should be sought when combining willow bark medications with other medications that slow blood clotting (such as Aspirin,

clopidogrel, diclofenac, heparin, warfarin, and others). Those with Aspirin sensitivities should also avoid willow bark.

What happens if you take too much:
Gastrointestinal and stomach upset.
Where to get it: The bark of willow trees.
IMPACT Expert Picks: St. Francis Herb
Farm tincture, New Roots White Willow bark,
Restorative Formulations Phyto-Dyne Px.



TURMERIC

What it is: Turmeric is a perennial plant that grows 5-6 feet high in the tropical regions of Southern Asia. It

is part of the ginger family. Turmeric has a warm, bitter taste and a yellow colour and is used in curry powders.

What it does: A powerful anti-inflammatory, the active ingredient in turmeric is curcumin. Constituents of the oil show evidence of anti-inflammatory and anti-arthritic activity. Curcumin constituents that are the responsible for the yellow colour of turmeric has bile-stimulating, liver-protectant, antioxidant and anticancer effects.

Why you might need it: Used to treat inflammation in the body including arthritis, cancer, diabetes, atherosclerosis, IBS, indigestion, chronic infections.

Who shouldn't use this: Turmeric in food is considered safe. Turmeric has a blood thinning effect, so caution must be taken with individuals prescribed antiplatelet drugs or botanicals. Turmeric should not be taken in individuals with bile duct obstruction, gallstones or stomach ulcers.

What happens if you take too much: Turmeric has a blood-thinning effect and can lead to clotting problems.

Where to get it: The roots and bulbs are used medicinally. Typically available as a tincture, tea or capsule.

IMPACT Expert Picks: Curcugen by Genestra, Botanica Turmeric Phytocaps, AOR Curcumin, Organika Curcumin, New Chapter Turmeric Force, New Roots Curcumin.



VALERIAN OFFICINALIS (VALERIAN)

What it is: Valerian is a flowering plant native to Europe, Asia and the

Americas.

What it does: Valerian produces a dose-dependent release of neurotransmitter

such as GABA. GABA has a calming effect on the nervous system.

Why you might need it: Used for insomnia, anxiety, nervousness and to relieve muscle spasms, headaches, depression, irregular heartbeat and trembling.

Who shouldn't use this: Valerian has the potential to interfere with anesthesia. therefore should not be used before surgery. What happens if you take too much: Mild potential side effects include tiredness the morning after use, headaches, dizziness and upset stomach. Some people may notice restlessness or heart palpitations.

Where to get it: The medicinal part of the plant is the root. Typically available as a tincture, tea or capsule.

IMPACT Expert Picks: Valerian Plus by Genestra, Organika Valerian Root Extract.



SYSTEMIC ENZYMES

What it is: These are enzymes used to assist the body in directing healthy immune and inflammatory

pathways. Such products are designed to act systemically to heal damaged tissues and are not intended to aid in digestion. Digestive enzymes, while potentially containing similar sets of enzymes, are used differently than systemic enzymes. Digestive enzymes must be taken with meals, while using enzymes systemically necessitates taking them at least 45 minutes before meals, or they will be ineffective and instead act as digestive enzymes.

What it does: In addition to assisting the body with various metabolic processes, systemic enzymes promote a healthy immune and inflammatory response that can aid in injury recovery. This occurs through remodelling damaged tissue, replacing it with healthy tissue.

Why you might need it: This can be added to a treatment plan directed at rehabilitating chronic or acute injuries.

Who shouldn't use this: Those with allergies to ingredients in the tablet.

What happens if you take too much: GI upset that can result in loose or increased number of bowel movements.

Where to get it: Supplement tablets. IMPACT Expert Picks: Douglas Labs Wobenzym, MegaFood Megazymes, Metagenics Metazyme, New Roots Plant Digestive. 10



