**Nalgesic™ Ultra**
*Featuring Cumerone®*

**Nalgesic™ Ultra** is a fast, safe and effective all natural COX – 2 inhibitor designed to effectively target muscular aches and pains, inflammation and arthritis. Each tablet is four times as strong as the original Nalgesic™ and is twice as strong as Nalgesic™ Forte.

**Nalgesic™ Ultra** has a clinically proven two way effect by inhibiting factors that cause cartilage degeneration and by providing symptomatic relief of pain and inflammation.

**Nalgesic™ Ultra** is a premium extract of curcumin from *Curcuma longa* (Turmeric) featuring fast-acting Cumerone® to effectively assist in the relief of symptoms of arthritis and other inflammatory conditions. The superior clinical efficacy of **Nalgesic™ Ultra** is due to a unique extraction process, which ensures a high yield of curcuminoids. These active principles are then blended as Cumerone® to significantly improve bioavailability, increasing absorption and ensuring a rapid onset of action.

**Indications/claims**
- Temporary relief of arthritic pain
- Temporary relief of the pain of osteoarthritis
- Temporary relief of rheumatic pain
- May assist in the management of osteoarthritis
- Temporary relief of the pain of rheumatoid arthritis [1]
- Relief of muscular aches and pains
- May reduce joint inflammation [2]
- May assist in reducing joint stiffness and joint swelling
- Fast acting for temporary relief of the pain of arthritis

**Active Ingredients**

Each tablet contains
- Cumerone 121.48 mg
- Total Curcumin 12.148 mg

**Dosage**

The recommended adult dose is one tablet daily to be swallowed with a glass of water.

For acute purposes, three tablets per day or as directed by a qualified healthcare practitioner. Not to be given to children four years of age and under.

**Contraindications**

Biliary obstruction was reported as a contraindication in the European Scientific Cooperative on Phytotherapy (E.S.C.O.P.) monograph on *Curcuma longa*. The German Commission E monograph reports that curcumin should only be used after seeking professional medical advice if gallstones are present.

**Interactions**

In theory, high-dose curcumin may increase the risk of bleeding when used concomitantly with anticoagulant drugs, so caution is advised. [3]

**Pregnancy and lactation**

Contraindicated: as the safety of therapeutic doses of curcumin in pregnancy has not been established.

The active ingredients in the Nutrition Care formulations, when professionally prescribed, may assist patients suffering from specific conditions. This statement does not imply or make a claim for a cure for disorders treated with any Nutrition Care products and their use should be based on published and relevant scientific and clinical data.

**Superior absorption**

It has been suggested that dietary *Curcuma longa* (Turmeric) would be an effective treatment agent in inflammatory degenerative joint diseases such as osteoarthritis. [4] However the curcumin content of turmeric powder can be quite low (~ 1%), and these levels are insufficient to achieve a significant therapeutic effect.

We have now shown using an in vitro caco-2 cell model (cultured Caco-2 cells are used in as surrogate for enterocytes of the small intestine) that curcuminoids from turmeric consisting of curcumin, bisdemethoxycurcumin and demethoxycurcumin display solubility in human physiological conditions and cross the cell membrane preferentially. [5]

Cumerone® contains highly bioavailable curcumin at levels that correlate with doses used in clinical trials for the effective management of pain and inflammation in arthritis. [6]

**Fast Acting**

Cumerone® has been specially blended and developed for superior absorption, resulting in greater efficacy and rapid onset of action.

**Turmeric Chemistry**

Turmeric contains protein (6.3%), lipids (5.1%), minerals (3.5%), carbohydrates (4%) and water (13.1%). In addition, it contains vitamins, minerals and trace elements such as carotenoids, thiamin, riboflavin, niacin, ascorbic acid, iron, zinc, calcium, magnesium and selenium in various concentrations.

The major active constituents (3-5%) are the curcuminoids, which are responsible for the yellow pigmentation as well as the majority of the biological activity.
Curcuminoids have anti-inflammatory, anti-oxidant, anti-allergic, anti-spasmodic, anti-bacterial, anti-fungal and anti-tumoral effects. [7][8] [9] [10] [11] [12]

The main curcuminoids are curcumin, demethoxycurcumin (DMC) and bisdemethoxycurcumin (BDMC). Minor curcuminoids are 5’-methoxycurcumin, dihydrocurcumin and the acidic arabinogalactans ukonanes A-D. [13]

**Clinical Trials**

The anti-arthritis activity of curcumin has been established with a double-blind cross over trial performed on 18 patients suffering from diagnosed rheumatoid arthritis. They showed significant improvement of symptoms (duration of morning stiffness, walking time and joint swelling) after administration of curcumin. Curcumin was given at a dose of 1200mg/day for five to six weeks. Significant improvement was observed in all patients. [14]

A study in 182 patients with rheumatoid arthritis and joint swelling showed a significant inter-group difference at the end of the 16 weeks of therapy. [15]

In another trial it was demonstrated that Curcumin had an anti-inflammatory effect and assisted in the reduction of stiffness and joint swelling. [16]

In a randomized placebo-controlled double-blind trial in 45 patients with postoperative inflammation, the anti-inflammatory properties of curcumin were evaluated. Curcumin was found to be more effective than phenylbutazone in reducing tenderness and pain at operative site. [17]

A review of five human trials published in the Journal of Alternative and Complementary Medicine in 2003, showed that in doses of 1125 – 2500mg, curcumin was safe and displayed evidence of anti-inflammatory activity. [1]

**Mechanism of action**

Curcumin acts upon pro-inflammatory mediators, it inhibits PGE2 interleukin IL-1, widely implicated in the pathogenesis of osteoarthritis. Curcumin is able to prevent the inflammatory process and to preserve cartilage from the action of IL-1 activated chondrocytes.

Cytokine activated chondrocytes produce large amounts of nitric oxide (NO) that play a role in IL-1 induced suppression of glycosaminoglycan and collagen synthesis. [18] Inhibition of pro-inflammatory cytokines such as IL-1 offers a valuable approach to the management of cartilage injury by reducing expression of genes involved in cartilage matrix degradation. [19] (Figure 2.)

![Figure 1](Image)

**Figure 1**

Curcumin interferes with inflammatory pathways by blocking the transcription factor NFκB. The numbers 1, 2, and 3 represent the pathways that are described to be affected by curcumin. NFκB: Nuclear transcription factor required for transcription of genes involved in the inflammatory responses; IB: Cytosolic inhibitor of NFκB; NIK: NFκB Inducing kinase; IKK: IκB kinases.

Curcumin inhibits arachidonic acid metabolism by inhibiting incorporation of arachidonic acid into platelet phospholipids and by inhibiting the deacylation of phospholipids. [4] [10]

Curcumin and its analogues inhibit cyclooxygenase-2 (COX-2) by inhibiting COX-2 mRNA and protein expression. [20] Down regulation of cyclooxygenase-2 and inducible nitric oxide synthetase happens through suppression of NFκB activation (see figure 2).

Curcumin inhibits pro-inflammatory cytokine production (TNF-α, IL-1β and IL-8) [21] [22]

Curcumin taken orally decreases the levels of inflammatory glycoprotein. [23]

Curcumin releases endogenous corticosteroids, which may help indirectly by stabilizing the lysosomal membrane. [24]

Curcumin inhibits pro-inflammatory leukotriene synthesis via inhibition of LOX Enzyme. [25]

Curcumin is a potent scavenger of superoxide and inhibits lipid peroxidation, [26] [27]
Curcumin reduces neutrophil infiltration in inflammatory conditions by stabilizing lysosomal enzymes membrane and lowering the release of lysosomal enzymes and eicosanoids from the neutrophils. \[^{[28]}\]

**Safety**

Human trials using 1125-3500 mg of curcumin daily have found it to be safe.\[^{[1]}\]

**References**


6. Tooley, G., L. Xantidis, and D. Lewis, *A double-blind, randomised, placebo controlled trial of the analgesic properties of curcumin (Nalgesic® Active Ingredient Curmerone 1200®) in osteoarthritis of the hand.* 2007, School of Psychology, Deakin University, Lewis Institute for Health & Wellbeing, Integrative Health Research Unit, Faculty of Health, Medicine,Nursing and Behavioural Sciences, Deakin University.


23. Ahmed and e. al, Biological basis for the Use of Botanicals in Osteoarthritis and Rheumatoid Arthritis: a review. eCam - 2005. 2((3)): p. 301-308.


