AOR CODE: AOR04255
Premium

**Urica**

**Helps Relieve Gout Symptoms**
Reduces the frequency and severity of gout attacks

Increases excretion of uric acid from the body

Limits production of uric acid crystals

Unique plant based formula

[Logo]

**Vegan**  **Non-GMO**

**Gout**

**AOR Code**
AOR04255

**Variant**
90 VEGI-CAPS

**Details**
Gout, a form of arthritis, develops from high uric acid levels in the blood which results in the formation of crystals that are deposited in the cartilage. This leads to extremely painful attacks involving inflammation and swelling of the joints, usually the big toe.

Urica is designed to reduce uric acid levels in the body, thereby reducing the frequency and severity of gout attacks. This formula may also benefit those with high uric acid levels or compromised kidney function. Urica combines a high dose of morin-rich mulberry extract with supportive doses of resveratrol and grape seed extract. Morin acts on the kidneys to promote the excretion of uric acid from the body, and also helps to reduce its production by inhibiting the enzyme xanthine oxidase, which converts certain compounds into uric acid. Polyphenols from resveratrol and grape seed extract also act on the kidneys and reduce xanthine oxidase activity.

AOR’s unique formula for healthy uric acid metabolism combines ingredients with a history of traditional use that are also backed by modern research.

**Label Info**

**Discussion**
Urica is a source of antioxidants for protection from uric acid crystal formation.
Product Variation
Product Code: AOR04255
Size: 90 VEGI-CAPS

Supplements Facts
Serving Size: 3 Capsules

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Mulberry</td>
<td>1500 mg</td>
</tr>
<tr>
<td>trans-Resveratrol</td>
<td>40 mg</td>
</tr>
<tr>
<td>Grape Seed extract (?85% oligomeric proanthocyanidins)</td>
<td>50 mg</td>
</tr>
</tbody>
</table>

Non-medical ingredients:
- microcrystalline cellulose
- Capsule: hypromellose.

Guarantees
AOR™ guarantees that all ingredients have been declared on the label. Contains no wheat, gluten, corn, nuts, peanuts, sesame seeds, sulphites, mustard, soy, dairy, eggs, fish, shellfish or any animal byproduct.

Adult Dosage
Take 1 capsule three times daily with/without food, or as directed by a qualified health care practitioner.

Cautions
Do not use if pregnant or breastfeeding. Consult a health care practitioner for use beyond 6 weeks. Consume with at least one liter of water throughout the day.

Source
Natural botanical extracts

Main Application
Gout
Elevated uric acid levels

Disclaimer
The information and product descriptions appearing on this website are for information purposes only, and are not intended to provide or replace medical advice to individuals from a qualified health care professional. Consult with your physician if you have any health concerns, and before initiating any new diet, exercise, supplement, or other lifestyle changes.

Research
Background

Gout

Gout, also referred to as metabolic arthritis or acute inflammatory monoarthritis, is caused by an abnormal build-up of uric acid in the blood – uric acid being a metabolic by-product of purine metabolism. Purines are natural substances found in many foods, and particularly in high protein foods like organ meats and fish like mackerel and sardines. Excessive blood levels of uric acid then lead to acute inflammation of the joints. ‘Classic Gout’ usually targets the joints of the big toe and other joints within the legs and feet and can affect people of all ages. However, another type of gout – called ‘Atypical Gout’ – can affect any joint in either the arms or legs and is observed predominantly in the elderly. Both types of gout are characterized by excruciating pain and swelling. In many typical cases of gout, patients are overweight, predisposed to Type II diabetes and hypertension, and are at a higher risk of cardiovascular disease. Gout is disproportionately found in societies whose diets include large amounts of protein, fat and alcohol. Since a fundamental facet of gout is the metabolism of protein, the areas of kidney, bladder and urinary tract health are primary targets for treatment.

Natural Treatment Options

Mulberry

Mulberry has been used for centuries in Chinese medicine to help reduce the symptoms of gout. Recent research has shown that the key to mulberry’s anti-gout actions may be a unique phytochemical called Morin. Morin is a naturally-occurring flavone found in the twigs of White Mulberry. The precise mechanism of action for morin appears to be two-fold and effectively synergistic. Firstly, it acts on the kidneys to inhibit uric acid reabsorption and thus promote the excretion of uric acid from the body. Secondly, it inhibits the enzyme xanthine oxidase, which is responsible for breakdown of purines into uric acid.

Polyphenols: Grape Seed Extract and Resveratrol

Polyphenols can also play a role in the prevention of kidney stones and help support the urinary system. Resveratrol, an exceptionally potent compound of this class, may inhibit xanthine oxidase activity, while grape seed extract may reduce xanthine oxidase and acts as an antioxidant since oxidative stress is proposed to be involved in gout.

Research

Morin

Animal studies have revealed that morin effectively inhibits the uptake of urate and to lower uric acid levels in rats. In-vitro studies have also demonstrated an anti-atherosclerosis potential on the part of morin.
Grape Seed Extract and Resveratrol

Resveratrol has been shown in-vitro to be capable of directly inhibiting xanthine oxidase activity. Polyphenols found in grape seed extract, have been shown, in-vitro, to cause a reduction in xanthine oxidase (XO) and xanthine-induced intracellular reactive oxygen species (ROS) accumulation. Researchers at the University of Hong Kong have identified ROS as being an important contributing factor in gouty arthritis. In animal models of gout (chickens), grape seed extracts have been shown to be highly effective at reducing serum uric acid levels.

Market Trends

There is not much in the way of supplements or natural treatments for gout. Gout is typically dealt with using medications and anti-inflammatories. Black cherry juice can also help reduce uric acid.

AOR Advantage

AOR’s Urica delivers a novel supplement, being one of the first to provide a combination of ingredients to help lower uric acid levels in the blood.

References


Abstract

Effect of Grape (Vitis vinifera L.) Seed on Reducing Serum Uric Acid Level in Gout-Animals Model

Sonlimar M and Sarmalina S.

Grape Seed (GS) contains proanthocyanidins, resveratrol, with known antioxidant and anti-inflammatory properties, through the inhibitory effects of these on transcription factors like nuclear factor kappa B (NF-KB) or activator protein-1 (AP-1). The aims of this study were to evaluate the effects of the GS on reducing serum uric acid in chickens gout-animals model. The experimental consisted of two groups, 1.5 kg of each broiler chickens gout-animals model in this study. Both 6 experimental and 2 control animals were fed by basal and chicken- liver diet for 5 days supplemented with urea 2% and calcium 2.5% with doses 10 gram twice a day. After 5 days of feeding these, treatment groups received 1 gram of GS twice a day for 3 days. Both of feeding by orally, normal-fed animals served as control. Starting from days 1,5,6,7,8 due to experimental design 1.5 ml of blood withdrawn from the wings. Analytical serum were examined in GMU pathological clinic Laboratory.

Hypouricemic Action of Selected Flavonoids in Mice: Structure-Activity Relationships


Hyperuricemia and gout appear to be rapidly increasing worldwide and frequently cause symptoms of metabolic syndrome. Dietary flavonoids have their potential beneficial effects on human health. In the present study, 15 flavonoids (quercetin, morin, myricetin, kaempferol, icariin, apigenin, luteolin, baicalin, silibinin, naringenin, formonoetin, genistein, puerarin, daidzin and naringin dihydrochalcone) were selected to investigate for their hypouricemic action in mice. Oral administration of quercetin, morin, myricetin, kaempferol, apigenin and puerarin at 50 and 100 mg/kg for 3 d was able to elicit hypouricemic actions in hyperuricemic mice induced by potassium oxonate. Luteolin, formonoetin and naringenin showed the significant effects only at 100 mg/kg. Quercetin, puerarin, myricetin, morin and kaempferol significantly reduced liver uric acid level in hyperuricemic animals. In addition, quercetin, morin, myricetin, kaempferol and puerarin exhibited significant inhibition on the liver xanthine oxidase (XOD) activities. It seems to be likely that these flavonoids reduce serum urate levels by mainly inhibiting XOD activity. However, the hypouricemic effect of apigenin observed seemed not to parallel with the changes in liver uric acid level and liver XOD activity, implying that apigenin might act via other mechanisms apart from inhibiting enzyme activity simply. Analysis of the chemical structure showed that a planar structure with the hydroxyl groups played a crucial role in hypouricemic activity of flavonoids. The exact mechanism of the hypouricemic action of flavonoids in vivo should be investigated in the future.

Morin (3,5,7,2?,4?-Pentahydroxyflavone) Exhibits Potent Inhibitory Actions on Urate Transport by the Human Urate Anion Transporter (hURAT1) Expressed in Human Embryonic Kidney Cells.

Drug Metabolism and Disposition; 2007; 35: 981-986.
Yu Z, Fong WP, Cheng CHK.

In allopurinol-allergic patients, uricosuric agents are often used in the treatment of hyperuricemia. The existing uricosuric agents are not without problems and the availability of better and safer alternatives is highly desirable. Our previous study (J Pharmacol Exp Ther (2006) 316:169-175) has demonstrated that morin (3,5,7,2?,4?-pentahydroxyflavone), which occurs in the twigs of Morus alba L. documented in traditional Chinese medicinal literature for treatment of conditions akin to gout, is a potent inhibitor of urate uptake in rat renal brush-border membrane vesicles. It is also effective in lowering uric acid level in a hyperuricemic rat model in vivo. Whether morin is an equally effective uricosuric agent in human requires verification. The human urate anion transporter (hURAT1) has recently been cloned and identified to be the organic anion transporter that mediates renal urate reabsorption in the human kidney. In the present investigation, human embryonic kidney cells were transfected with hURAT1 and the expression was validated by reverse transcription-polymerase chain reaction and subcellular distribution of the exogenously introduced transporter by confocal microscopy. The inhibitory actions of morin on human renal urate reabsorption were demonstrated using this system. The IC50 value of the inhibition by morin was determined to be 2.0 µM, compared with 50 µM for probenecid, 100 µM for sulfipyrazone, and 0.3 µM for benzbromarone. Kinetic analysis of the uptake inhibition by morin indicates that this compound is a competitive inhibitor of urate uptake on the human urate transporter with a Ki value of 5.74 µM.

A 13-week subchronic toxicity study of dietary administered morin in F344 rats

Food and Chemical Toxicology. 2006; 44: 891-897

Cho YM, Onodera H, Ueda M, Imai T, Hirose M.

A subchronic toxicity study of a flavonoid morin was performed in both sexes of F344 rats with dietary administration at concentrations of 0%, 0.625%, 1.25%, 2.5% and 5% (w/w) for 13 weeks. No mortality or abnormal clinical signs were observed throughout the experimental period in any group. Although a slight tendency for increase in food intake was noted in both sexes of the 2.5% and 5.0% groups, slight non-significant body weight decrease was observed in 5.0% males. Significant increases in alanine transaminase (ALT; over 2.5%), alkali phosphatase (ALP; 1.25% and 5.0%) and relative liver weights (1.25% and 2.5%) in males and in c-glutamyl transpeptidase (c-GT), aspartate transaminase (AST), ALT, relative liver weights in the 2.5% and 5.0% females and ALP in 5.0% females were noted. Increased urea nitrogen and relative kidney weights at dose of 1.25% and above and creatinine at 5.0% were observed also in females. On histopathological observation, hepatocyte hypertrophy was detected in 3 of 10 5.0% females. Based on the above findings, the no-observed-adverse-effect level (NOAEL) for both sexes was estimated to be 0.625% (299 and 356 mg/kg b.w./day for males and females, respectively).

The Dual Actions of Morin (3,5,7,2?,4?-Pentahydroxyflavone) as a Hypouricemic Agent: Uricosuric Effect and Xanthine Oxidase Inhibitory Activity

Yu Z, Fong WP, Cheng CHK.

Hyperuricemia is associated with a number of pathological conditions such as gout. Lowering of elevated uric acid level in the blood could be achieved by xanthine oxidase inhibitors and inhibitors of renal urate reabsorption. Some natural compounds isolated from herbs used in traditional Chinese medicine have been previously demonstrated to possess xanthine oxidase inhibitory activities. In the present investigation, morin (3,5,7,2',4'-pentahydroxyflavone), which occurs in the twigs of Morus alba L. documented in traditional Chinese medicinal literature to treat conditions akin to gout, was demonstrated to exert potent inhibitory action on urate uptake in rat renal brush-border membrane vesicles, indicating that this compound acts on the kidney to inhibit urate reabsorption. Lineweaver-Burk transformation of the inhibition kinetics data demonstrated that the inhibition of urate uptake was of a competitive type, with a Ki value of 17.4 µM. In addition, morin was also demonstrated to be an inhibitor of xanthine oxidase. Lineweaver-Burk analysis of the enzyme kinetics indicated that the mode of inhibition was of a mixed type, with Ki and Kies values being 7.9 and 35.1 µM, respectively. Using an oxonate-induced hyperuricemic rat model, morin was indeed shown to exhibit an in vivo uricosuric action, which could explain, in part at least, the observed hypouricemic effect of morin in these rats. The potential application of this compound in the treatment of conditions associated with hyperuricemia was discussed.

Antioxidation of Human Low Density Lipoprotein by Morin Hydrate

Life Sciences. 1995; 57(3): 51-56

Wu TW, Fung KP, Yang CC, Weisel RD.

Oxidative modification of low density lipoprotein (LDL) has been suggested to be a risk factor for the development of atherosclerosis. Agents which can protect LDL from oxidation may be useful in preventing atherogenesis. Here, we found that morin hydrate, at 100 HAM concentration, effectively inhibits Cu2+ induced oxidation of LDL. The oxidation of LDL was assessed by agarose gel electrophoresis. This was further studied by measuring the increased values of the malondialdehyde equivalents and the decreased numbers of reactive amino groups on oxidized LDL. Trolox, at equimolar concentrations, exhibit similar effects in preventing oxidation of LDL.