Rosamarinus officinalis

TAXONOMICAL CLASSIFICATION:[1]

- Kingdom: Plantae
- Phylum: Spermatophyta
- Subphylum: Angiospermae
- Class: Dicotyledonae
- Order: Lamiales
- Family: Lamiaceae
- Genus: Rosmarinus
- Species: Rosmarinus officinalis

INTRODUCTION[2,3]:

Rosemary (Rosmarinus ojJicinalis Linn. Fam. Labiatae) is an evergreen branched bushy shrub, attaining a height of about one metre with upright stems, whitish-blue flowers and dark green leaves which are small with edges turned over backward. It grows wild ly along the north and south coasts of the Mediterranean sea, and also in the sub-Himalayan areas6 . 8 . It has been cultivated since ancient days in England, Germany, France, Denmark and other Scandinavian countries, Central America, Venezuela and the Philippines 6 Rosemary is one of the ancient cult plants, closely associated with love and marriage, birth and death . In England and Germany it is considered as a symbol of remembrance and is still used in bridal bouquets and a spring is put in the cradle of a newly born child to protect against evil influences and forces; it is aiso placed in books and among clothes to protect them from moths and to produce a pleasant odour9 . The name of the plant is mentioned in some world c1assic6 such as Hamlet and Don Quixote9 "Rosmarinus" is a Latin word which means "Dew of tile Sea" (Ros=Dew; Marinus=Sea). When the aqueous extract of rosemary was analyzed to identify the active principles, its chemical composition revealed the presence of many substances whose antioxidant and anti-lipoperoxidant activities have been demonstrated, namely rosmarinic acid (RA), caffeic acid (CA), chlorogenic acid, carnosolic acid, rosmanol, carnosol and different diterpenes 13.14 , rosmari-diphenoI1 5 , rosmariquinonel 6 and many other natural antioxidants, ursolic acid, glucocolic acid and the alkaloid rosmaricine7 . The rosemary oil contains esters (2-6%) largely as borneol, cineoles and several terpenes, chiefly a-pinene and camphene6 . The fresh material yields about 1–2% of volatile oil containing 0.8–6% of esters, and 8–20% of alcohols. The principal constituents are 1,8-cineole, borneol, camphor, bornyl acetate, and monoterpene hydrocarbons. Rosemary leaves also contain the triterpene alcohols α- and β-

amyrins, rosmarinic acid, rofficerone caffeic acid, chlorogenic acid, α-hydroxydihydrocaffeic acid, glycosides of luteolin and diosmetin, carnosolic acid, carnosol, rosmanol, epirosmanol, and isorosmanol.

PROPERTIES AND USES: [4]

- **A**ntibacterial
- Antioxidant
- Inhibitory effect of tumor cell immigration
- Inhibitory effect of tumor cell proliferation
- Protective effect of transplanted livers
- Apoptotic effect on tumor cells
- Protective effect of photoreceptor cells
- Anti-inflammatory
- Inhibitory effect of digestive enzymes (lipase, α-amylase, and α-glucosidase)
- Antiviral
- Antiproliferative
- Neuroprotective
- Anticancer
- Inducer of osteoblastic activity and reducer of osteoclastic activity
- Hypouricemic
- Inductor of insulin sensitivity
- Reducer of weight gain and atherosclerosis
- Protective effect against peptic ulcer

- Immunomodulatory
- Hypoglycemic
- Antifungal, antihyphal, and antibiofilm
- Anti-atopic dermatitis
- Antidiabetic
- Antinociceptive
- Antidepressant
- Anxiolytic
- Acaricidal

SIDE EFFECTS OF EXCESS CONSUMPTION:[5]

When taken by mouth: Rosemary is **LIKELY SAFE** when consumed in amounts found in foods. Rosemary leaf is **POSSIBLY SAFE** for most people when taken by mouth as a medicine in doses up to 6 grams per day. But taking undiluted rosemary oil or very large amounts of rosemary leaf is **LIKELY UNSAFE**. Taking large amounts of rosemary can cause vomiting, uterine bleeding, kidney irritation, increased sun sensitivity, skin redness, and allergic reactions.

When applied to the skin: Rosemary oil is **POSSIBLY SAFE** for most people when applied to the skin for medicinal purposes. It might cause allergic reactions in some people.

When inhaled: Rosemary is **POSSIBLY SAFE** for most people when inhaled as aromatherapy for medicinal purposes

DOSAGE: [5]

BY MOUTH:

- **For memory**: 500 milligrams of rosemary extract twice daily for one month has been used.

INHALED AS AROMATHERAPY:

- **For memory**: Four drops of pure rosemary essential oil (Tisserand Aromatherapy) has been applied to an aromatherapy diffuser pad 5 minutes before testing.

RESEARCH:

1. In this double-blinded randomized controlled trial, the 68 participating students randomly received 500 mg rosemary and placebo twice daily for one month. Prospective and retrospective memory performance, depression, anxiety and sleep quality of the students were measured using Prospective and Retrospective Memory Questionnaire, Hospital Anxiety and Depression Scale, and Pittsburgh Sleep Quality Inventory at baseline and after one month. The scores of all the scales and subscales except the sleep latency and sleep duration components of Pittsburgh Sleep Quality Inventory were significantly decreased in the rosemary group in comparison with the control group after one month. Rosemary as a traditional herb could be used to boost prospective and retrospective memory, reduce anxiety and depression, and improve sleep quality in university students. [6]
2. Rosemary (*Rosmarinus officinalis* L.) is one of the most economically important species of the family Lamiaceae. Native to the Mediterranean region, the plant is now widely distributed all over the world mainly due to its culinary, medicinal, and commercial uses including in the fragrance and food industries. Among the most important group of compounds isolated from the plant are the abietane-type phenolic diterpenes that account for most of the antioxidant and many pharmacological activities of the plant. Rosemary diterpenes have also been shown in recent years to inhibit neuronal cell death induced by a variety of agents both *in vitro* and *in vivo*. The therapeutic potential of these compounds for Alzheimer's disease (AD) is reviewed in this communication by giving special attention to the chemistry of the compounds along with the various pharmacological targets of the disease. The multifunctional nature of the compounds from the general antioxidant-mediated neuronal protection to other specific mechanisms including brain inflammation and amyloid beta (Aβ) formation, polymerisation, and pathologies is discussed.[7]

PRECAUTIONS & WARNINGS: [5]

Pregnancy: Rosemary is **POSSIBLY UNSAFE** when taken by mouth in medicinal amounts. Rosemary might stimulate menstruation or affect the uterus, causing a miscarriage. There isn't enough reliable information to know if rosemary is safe when applied to the skin when pregnant. Stay on the safe side and avoid use.

Breast-feeding: There isn't enough reliable information to know if rosemary is safe to use when breast-

feeding. Stay on the safe side and avoid use.

Aspirin allergy. Rosemary contains a chemical that is very similar to aspirin. This chemical may cause a reaction in people who are allergic to aspirin.

Bleeding disorders: Rosemary might increase the risk of bleeding and bruising in people with bleeding disorders. Use cautiously.

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