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TEA HEALTH & WELLNESS TIPS

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ROOIBOS TEA HEALTH and WELLNESS NOTES

- Although human studies of rooibos are scarce in scientific literature, animal studies suggest it has potent antioxidant, immune-modulating and chemopreventive effects. In addition, rooibos tea has not been found to have any adverse effects
- Rooibos is purported to assist with nervous tension, allergies and digestive problems
- A study performed by Japanese scientists suggested that Rooibos tea is beneficial in the topical treatment of acne. This is due to levels of alpha hydroxy acid, zinc and superoxide dismutase present in the herb
- Research is being conducted with encouraging results that show rooibos may have a positive effects is mitigating the affects of Type 2 diabetes.
- A study in South Africa on humans showed that consuming 6 cups of rooibos per day reduce biomarkers associated with heart disease.
- The Khoi tribe of South Africa made tea from the rooibos plant as a method of improving their health. It is interesting to note they are particularly tall.
- Almonds are a rich source of vitamin E, containing 24 mg per 100 g. They are also rich in monounsaturated fat, one of the two "good" fats responsible for lowering LDL cholesterol.

South African herbal teas: *Aspalathus linearis*, *Cyclopia spp.* and *Athrixia phylicoides*-A review

- Abstract no: JOURNAL OF ETHNOPHARMACOLOGY, vol. 119, no. 3, pp. 376-412, 2008

Rooibos (*Aspalathus linearis* (Brum.f) Dahlg.) and honeybush (*Cyclopia Vent. species*) are popular indigenous South African herbal teas enjoyed for their taste and aroma. Traditional medicinal uses of rooibos in South Africa include alleviation of infantile colic, allergies, asthma and dermatological problems, while a decoction of honeybush was used as a restorative and as an expectorant in chronic catarrh and pulmonary tuberculosis. Traditional medicinal uses of *Athrixia phylicoides* DC., or bush tea, another indigenous South African plant with very limited localised use as herbal tea, include treatment of boils, acne, infected wounds and infected throats. Currently rooibos and honeybush are produced for the herbal tea market, while bush tea has potential for commercialisation. A summary of the historical and modern uses, botany, distribution, industry and chemical composition of these herbal teas is presented. A comprehensive discussion of *in vitro*, *ex vivo* and *in vivo* biological properties, required to expand their applications as nutraceutical and cosmeceutical products, is included, with the main emphasis on rooibos. Future research needs include more comprehensive chemical characterisation of extracts, identification of marker compounds for extract standardisation and quality control, bioavailability and identification of bio-markers of dietary exposure, investigation of possible herb-drug interactions and plant improvement with regards to composition and bioactivity.

Phenolic Contribution of South African Herbal Teas to a Healthy Diet

- Abstract no: NATURAL PRODUCT COMMUNICATIONS, vol. 4, no. 5, pp. 701-718, 2009

South African herbal teas, rooibos and honeybush, are increasingly enjoyed as healthy alternatives to *Camellia sinensis* teas. They contribute to the diet with bioactive phytochemicals not commonly found in foods. Major compounds of rooibos are the unique dihydrochalcone, aspalathin, and its flavone isomers, orientin and isoorientin. Honeybush contributes the xanthenes, mangiferin and isomangiferin and the flavanones, eriocitrin, narirutin and hesperidin. All these Compounds are either C-glucosides or O-rhamnoglucosides, which are poorly absorbed. Phase II metabolism and degradation by intestinal bacteria are important factors in their absorption. Modulation of drug metabolising enzymes is indicated which not only could affect the therapeutic window of drugs, but also the bioavailability of other dietary flavonoids.

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Effects of Rooibos Tea Extract on Antigen-specific Antibody Production and Cytokine Generation in Vitro and in Vivo

- Abstract no: Biosci. Biotechnol. Biochem., Vol. 65, 2137-2145 (2001) .

Rooibos tea contains a large amount of flavonoids and acts as a potent antioxidant. In this study, we examined the effects of Rooibos tea extract on antigenspecific antibody production and cytokine generation in vitro and in vivo. The primary in vitro anti-ovalbumin (anti-OVA) or sheep red blood cell (SRBC) antibody production in murine splenocytes was markedly stimulated by the addition of the tea extract at concentrations of 1-100 µg/ml. On the other hand, a nonspecific antibody response elicited with lipopolysaccharide (LPS) in purified splenic B-cells was not modified by the extract. Rooibos tea extract caused an increase in the generation of interleukin 2 (IL-2) both in OVA- and anti-CD3-primed splenocytes at concentrations ranging from 10 µg/ml to 1000 µg/ml. In contrast, this tea extract suppressed the generation of interleukin 4 (IL-4) in OVA-primed splenocytes. Moreover, the reduction of OVA-induced antibody production in serum of the cyclosporin A (CyA)-treated rats can be significantly restored and the IL-2 generation in murine splenocytes was stimulated, following oral administrations of Rooibos tea extract. Thus, our findings suggested that Rooibos tea extract may facilitate the antigen-specific antibody production through selective augmentation of IL-2 generation both in vitro and in vivo. Collectively, Rooibos tea intake may be of value in prophylaxis of the diseases involving a severe defect in Th1 immune response such as cancer, allergy, AIDS, and other infections.

A beautiful world

- Abstract no: Delicious Living, vol. 24, no. 12, pp. 48-9, December 2008

Tea for your T-zone isn't a secret—natural skin care has featured antioxidant-rich green and white teas for years. —But your cells needs a multitude of antioxidants, which each offer different benefits, to stay healthy, says Ray Sahelian, MD, a Los Angeles–based supplements specialist. As the only source of the antioxidant aspalathin, Rooibos (pronounced —ROY-bosll)—a red tea traditionally used by the South African Khoisan tribe—is on the up-and-up. Aspalathin is an anti-inflammatory polyphenol that reduces eczema's and acne's dry, flaky symptoms. New research suggests this antioxidant is most abundant and beneficial when rooibos is in its green (unfermented) form, commonly found in personal care products, rather than as a drinkable tea.

Reverse aging.

- Abstract no: Delicious Living, vol. 24, no. 9, pp. 55-6, September 2008

The skin care aisle is flooded with salves and moisturizers that contain green tea—and for good reason—but over the next couple of years, red will become the new green. Recent studies show that red tea, also called rooibos pronounced —ROY-bosll), contains nearly 50 percent more skin-salvaging antioxidants than green tea. Bonus: This South African tea is caffeine-free and packed with zinc, a mineral that helps the body metabolize fatty acids and keep cells plump.

Rooibos Tea, Aspalathus linearis, a Caffeineless, Low-Tannin Beverage

- Abstract no: Economic Botany, Vol. 37, No. 2 (Apr. - Jun., 1983), pp. 164-173

Rooibos tea (*Aspalathus linearis*, formerly *A. contaminatus*), is a leguminous shrub with needlelike leaves native to mountain slopes of western Cape Province, South Africa. Its beverage use by the Hottentots was first reported by the botanist Carl Thunberg in 1772. About 1900, it began to be marketed and then domesticated on a small scale. Seed selection and improved cultivation and processing started in the 1920s. Important advances were made in 1930. Demand for the product jumped during World War II because of the shortage of Oriental tea, then declined. The industry was stabilized in 1954 and continued to expand, with exports to Australia, New Zealand, Europe, the United Kingdom, Canada and, to a very limited extent, the United States. A fungus disease, then drought, followed by floods temporarily reduced the supply in 1980. The tea is gaining recognition for its freedom from caffeine, low tannin and high ascorbic acid content. It contains the antispasmodic principle, quercetin, and is said to have enough fluoride to inhibit caries. Consumer tests indicate that rooibos tea may be an acceptable alternative to tea, coffee, cocoa and high-caffeine soft drinks.

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Studies of anti-inflammatory effects of Rooibos tea in rats

- Abstract no: Pediatrics International [Pediatr. Int.]. Vol. 51, no. 5, pp. 700-704. Oct 2009.

BACKGROUND: Rooibos tea is known to be caffeine free with abundant flavonoids. Aspalathin and nothofagin, the main flavonoids contained in Rooibos tea, have stronger anti-oxidative activity than other flavonoids. As oxidative stress can induce inflammation, the anti-inflammatory effects of Rooibos tea were investigated using a rat colitis model. **METHODS:** Seven-week-old Wister rats were divided into two groups: one group given Rooibos tea, and one given water. After four weeks of breeding, serum superoxide dismutase (SOD) levels were determined using the Electron Spin Resonance analysis. Urine 8-hydroxy-2'-deoxyguanosine (8-OHdG) concentrations were also determined as reflections of DNA damage using enzyme-linked immunosorbent assay. Furthermore, rats were administered dextran sodium sulfate (DSS), which is known to induce colitis in rodents, with or without Rooibos tea to evaluate its anti-inflammatory activity. Clinical symptoms, hemoglobin, serum iron and SOD levels were compared between the groups. **RESULTS:** There were no significant differences in bodyweight gain or laboratory data between the groups. The serum SOD levels were significantly increased, and urine 8-hydroxy-2'-deoxyguanosine levels were significantly decreased in the Rooibos group compared with the controls ($P < 0.05$ in each). After DSS administration, the serum SOD levels were significantly higher in the Rooibos group compared to the controls ($P < 0.05$). As a result, a decreased hemoglobin level, observed in the control group, was prevented in the Rooibos group after the DSS challenge. **CONCLUSION:** Rooibos tea may prevent DNA damage and inflammation by its anti-oxidative activity in vivo. As Rooibos tea is free from caffeine, routine intake may be safe and useful in reducing oxidative stress in children.

A review of the bioactivity of South African herbal teas: rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia intermedia*).

USDA Human Nutrition Research Center on Aging at Tufts University, 711 Washington St., Boston, MA. Rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia intermedia*) are popular tisanes in their native South Africa and have a growing worldwide market. Both herbal teas are used traditionally for medicinal purposes and are rich in polyphenols with rooibos a rare source of the dietary dihydrochalcones, aspalathin and nothofagin. The principal polyphenols in honeybush include the xanthone mangiferin and the flavonones hesperitin and isokuranetin. Despite their divergent phytochemical and nutrient compositions, rooibos and honeybush share potent antioxidant and antimutagenic activities in vitro. Animal model studies indicate both herbal teas possess potent antioxidant, immune-modulating and chemopreventive actions. However, human studies of rooibos are limited and of honeybush are absent. No adverse effects of rooibos or honeybush consumption as tisanes have been reported.

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