Black Current Seed Oil

Dr Lynn Lafferty and Dr. Luminita M Dobrican

Background:

The oil from the seeds of the Black Current Seed plant contains varying amounts (15% to 19%) of fatty acids: gamma- and alpha-linolenic acids, and stearidonic acid [1,2], as well as anthocyanins, flavonoids, and 2 nitrile-containing compounds [3]. The leaves of the plant contain prodelphindins [4]. Because of black currant's high essential fatty acid content, researchers believe that it may be effective in the treatment of inflammatory conditions and pain management, as well as in regulating the circulatory system and increasing immunity.

Aside from a high content of vitamin C (L-ascorbic acid) [5], the berries contain flavonoids, including quercetin, myricetin, and kaempferol [6,7,8,9]; and at least 15 different phenolic acids, including anthocyanins and proanthocyanidins [10,11,12,13,14,15,16,17]. p-Coumaric acid has been identified as one of the predominant phenolic acids [13,15,17]. The aroma of juice extracts is attributed to the presence of terpenes, esters, and alcohols [18].

On the Omega 3 pathway, the conversion from Alpha Linoleic Acid to Steridonic Acid needs the presence of B6, Zinc and other co-factors. Since black currant seeds are rich in B6 vitamin, it does not require co-administration of B6 in order to convert from Alpha Linoleic to Steridonic Acid on the Omega 3 pathway. At the same time, on the Omega 6 pathway, it supplies Gamma Linoleic acid, overriding the need to convert from Linoleic Acid to Gamma Linoleic Acid.

As a medicinal treatment, black currant seed oil is the most commonly used part of the plant and is available in capsule form.

Anecdotal evidence suggests that black currant may interact with anticoagulants such as warfarin (Coumadin®), clopidogrel (Plavix®), aspirin (Bayer®, Bufferin®, Ecotrin®, St. Joseph's®, etc.), enoxaparin (Lovenox®), and dalteparin (Fragmin®) [19]. In general, no significant adverse events have been reported in the available literature, although more studies and clinical trials are needed to sufficiently evaluate the potential effects of black currant.
Black Currant Seed Oil's effects have been studied for use as/in:

- Anticoagulant [47]
- Antimicrobial [20,21,22]
- Anthypertensive [23]
- Anti-inflammatory [24,25,31]
- Antioxidant [26,27,28]
- Antithrombotic
- Antiviral [29,30]
- Circulatory problems [35]
- Cyclooxygenase (COX) inhibitor [32]
- Diabetic Neuropathy [33]
- Fatty acids profile [34]
- Hematologic [35]
- Immunomodulator [36]
- Urolithiasis [37]
- Venous disorder [38]
- Vision [39,42]
- Cancer [43,44]
- Atopic Dermatitis [45]

Dosing:

Adult (age =18):

Oral:

- General: As a dietary supplement, black currant is available in 500mg and 1,000mg capsules. No toxicity concerns or issues have been reported with black currant consumed as food or ingested in 500mg tablets three times a day.
- Antioxidant: In a crossover study, five volunteers ingested 750mL, 1,000mL, or 1,500mL of black currant mixed with apple juice (1:1) with a corresponding intake of 4.8, 6.4, and 9.6mg of quercetin daily per day for one week to evaluate antioxidative effects [46]. Researchers concluded that changes in plasma could have been related to several components of the juice and could not be attributed solely to its quercetin content. Another dose used is 475-1,000mL of black currant juice per deciliter of liquid according to body weight [27].
- Hypertension: 6g of black currant seed oil daily has been used for eight weeks [23].
- Immune-enhancing effects in the elderly: A dose of 4,500mg per day was given to 22 elderly volunteers in a clinical study to evaluate the effects black currant had on the immune system over a period of two weeks [36]. Blood samples were collected to analyze total antioxidant capacity, biochemical parameters, antioxidant vitamins, LDL peroxidation, and DNA damage in peripheral blood lymphocytes, but the study was not long enough to determine changes in antioxidant and oxidative status.
- Immunomodulation: 750mg of black currant seed oil has been used for two months [36].
- Musculoskeletal conditions (stiffness): 7.7-17mg of black currant anthocyanins has been taken daily for two weeks [35].
- Night vision: 12.5-50mg of black currant anthocyanin concentrate has been used [39].
- Rheumatoid arthritis: 15 capsules of black currant seed oil have been taken daily for 24 weeks [31].
- Venous disorders: Two doses of black currant extract have been taken every day for up to 24 weeks [38].

**Children (age <18):**

Insufficient available evidence.

Although the evidence is not very strong due to lack of funding, the existent studies show overall promising and positive results.

**References:**


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