Exercise Recovery

Short-term blackcurrant extract consumption modulates exercise-induced oxidative stress and lipopolysaccharide-stimulated inflammatory responses Am J Physiol Regul Integr Comp Physiol 297: R70-R81, 2009. First published April 29, 2009 K. A. Lyall, S. M. Hurst, J. Cooney, D. Jensen, K. Lo, R. D. Hurst, and L. M. Stevenson

Abstract Conclusion

. . . . In summary, our findings support the concept that consumption of blackcurrant anthocyanins alleviate oxidative stress, and may, if given at the appropriate amount and time, complement the ability of exercise to enhance immune responsiveness to potential pathogens.

Cytoprotective effects of anthocyanins and other phenolic fractions of Boysenberry and blackcurrant on dopamine and amyloid β-induced oxidative stress in transfected COS-7 cells Journal of the Science of Food and Agriculture
Volume 87, Issue 11, Date: 30 August 2007, Pages: 2061-2067 Dilip Ghosh, Tony K McGhie, Derek R Fisher, James A Joseph

Abstract Conclusion

. . . . Our results provide further evidence for the protective effects of berries against the neurotoxic effect of dopamine and amyloid $\beta_{25\text{-}35}$ in brain cells.

Effects of anthocyanins and other phenolics of boysenberry and blackcurrant as inhibitors of oxidative stress and damage to cellular DNA in SH-SY5Y and HL-60 cells Journal of the Science of Food and Agriculture Volume 86, Issue 5, Date: 15 April 2006, Pages: 678-686 Dilip Ghosh, Tony K McGhie, Jingli Zhang, Aselle Adaim, Margot Skinner

Abstract Conclusion

. . . . The phenolic extract of blackcurrant demonstrated the highest protective effect against H_2O_2-induced neurotoxicity, oxidative stress and DNA damage and may be a good candidate for inclusion into a processed functional food.

Asthma

Blackcurrant proanthocyanidins augment IFN-γ-induced suppression of IL-4 stimulated CCL26 secretion in alveolar epithelial cells Molecular Nutrition & Food Research Early View – May 2010 Suzanne M. Hurst, Tony K. McGhie, Janine M. Cooney, Dwayne J. Jensen, Elaine M. Gould, Kirsty A. Lyall, Roger D. Hurst

Abstract Conclusion

. . . . Our findings support the potential for blackcurrant polyphenolic compounds to reduce eosinophil recruitment and alleviate eosinophilic-driven airway inflammation.

Diabetes

Berries modify the postprandial plasma glucose response to sucrose in healthy subjects
Br J Nutr. 2010 Apr;103(8):1094-7. Epub 2009 Nov 24. Törrönen R, Sarkkinen E, Tapola N, Hautaniemi E, Kilpi K, Niskanen L.

Abstract Conclusion

These results show that berries rich in polyphenols decrease the postprandial glucose response of sucrose in healthy subjects. The delayed and attenuated glycaemic response indicates reduced digestion and/or absorption of sucrose from the berry meal.

Berry Preparations for Treatment of Diabetes and Metabolic Syndrome
International Patent Application: PCT/US 2008/082103 Ribnicky D M, Raskin L, Lila M A, Gries M, Yousef G, Kuhn P.

Invention Extract

. . . . The present invention further provides a method for treating a disordered metabolism syndrome utilizing anthocyanin-rich extracts from berries.

Eye Health & Vision

Effects of Black Currant Anthocyanoside Intake on Dark Adaptation and VDT Work-induced Transient Refractive Alteration in Healthy Humans Altern Med Rev 2000;5(6):553-562 Hitoshi Nakaishi, Hitoshi Matsumoto, Shigeru Tominaga, Masao Hirayama

Abstract Conclusion

. . . . This information also suggests that intake of anthocyanoside-rich foods may have previously unknown effects in terms of preventing visual problems attributable to working with computers and VDTs.

Cancer Prevention

Berry phytochemicals, genomic stability and cancer: Evidence for chemoprotection at several stages in the carcinogenic process
Molecular Nutrition & Food Research Volume 51, Issue 6, Date: June 2007, Pages: 665-674 Susan J. Duthie

Abstract Conclusion

. . . . Anticarcinogenic mechanisms include modulation of carcinogen activation and detoxification, decreased DNA binding of the carcinogen, inhibition of oxidative DNA damage, alteration in cell signalling and malignant transformation and inhibition of cell invasiveness and metastasis. . . .

Lifespan

Quercetin, flavonoids and the life-span of mice Experimental Gerontology Volume 17, Issue 3, 1982, Pages 213-217 Eleri Jones and R.E. Hughes

Abstract Conclusion

. . . . A blackcurrant juice extract, containing a mixture of flavonoids in addition to quercetin, prolonged significantly the life span of the 'older dying' females.

Blood Circulation & Brain Function

Vascular action of polyphenols
Molecular Nutrition & Food Research Volume 53, Issue 3, Date: March 2009, Pages: 322-331 Dilip Ghosh, Arjan Scheepens

Abstract Conclusion

. . . . Cerebral blood flow (CBF) must be maintained to ensure a constant delivery of oxygen and glucose as well as the removal of waste products. Increasing blood flow is one potential way for improving brain function and the prospect for increasing CBF with dietary polyphenols is extremely promising.

Dietary supplementation with fruit polyphenolics ameliorates age-related deficits in behavior and neuronal markers of inflammation and oxidative stress
AGE, Volume 27, Number 1 / March, 2005, Pages 49-57 Barbara Shukitt-Hale , Rachel L. Galli, Vanessa Meterko, Amanda Carey, Donna F. Bielinski, Tony McGhie and James A. Joseph

Abstract Conclusion

. . . . It appears that the polyphenols in blueberries and cranberries have the ability to improve muscle tone, strength and balance in aging rats, whereas polyphenols in blueberries, cranberries and blackcurrants have the ability to enhance neuronal functioning and restore the brain's ability to generate a neuroprotective response to stress.

Cerebral Activating Extract
U.S. Patent No. 5,262,162 granted 1993 Bormann J, Demisch L, Gurtelmeyer M, Koch R, Schatton w Merz & Co. GMBH & Co.

Invention Extract

. . . . The use of an effective monamine oxidase-inhibitory amount or portion of black currant juice (Ribes nigrum L..) or concentrate or dry extract thereof to activate the brain and central nervous system, in a living animal, especially a human being, in need thereof, and thereby to increase the general cerebral performance, especially in healthy and elderly people, and for the prevention, treatment, and alleviation of neurodegenerative diseases associated with reduced cerebral performance, such as Parkinson's disease, dementia, and mood disorders, and compositions thereof for such purpose are disclosed.

Blood Circulation & Muscle Recovery

Effects of blackcurrant anthocyanin intake on peripheral muscle circulation during typing work in humans
European Journal of Applied Physiology Volume 94, Numbers 1-2 / May, 2005, Pages 36-45 Hitoshi Matsumoto , Eri Takenami, Keiko Iwasaki-Kurashige, Takuya Osada, Toshihito Katsumura and Takafumi Hamaoka

Abstract Conclusion

. . . . The results of this study suggest that intake of BCA may improve shoulder stiffness caused by typing work by increasing peripheral blood flow and reducing muscle fatigue.

Improvement of cold water immersion induced circulation impairment by blackcurrant extract intake-the investigation on cold constitutional women
The Journal of the Japanese Society of Thermology Volume 23, 2004, Pages 194-201 Takenami E, Kurashige KI, Matsumoto H, Osada T, Okubo M, Hamaoka T

Abstract (*excerpt translated from Japanese*)

. . . . Body temperature in the hand did not return to normal after 15 minutes without blackcurrant consumption. In contrast, however, body temperature began to return to normal 10 minutes after blackcurrant consumption.

Blood Circulation & Blood Pressure/Cholesterol

Endothelium-Dependent Vasorelaxation Induced by Black Currant Concentrate in Rat Thoracic Aorta

The Japanese Journal of Pharmacology Vol. 89 (2002) , No. 1 pp.29-35 Yuko Nakamura, Hitoshi Matsumoto and Kazuo Todoki

Abstract Conclusion

. . . . These results indicate that, in the rat aorta, BC concentrate enhances synthesis of NO, which subsequently induces the endothelium-dependent vasorelaxation via the H_1-receptors on the endothelium.

Favorable effects of berry consumption on platelet function, blood pressure, and HDL cholesterol

American Journal of Clinical Nutrition Vol. 87, No. 2, 323-331, February 2008 Iris Erlund, Raika Koli, Georg Alfthan, Jukka Marniemi, Pauli Puukka, Pirjo Mustonen, Pirjo Mattila and Antti Jula

Abstract Conclusion

. . . . The consumption of moderate amounts of berries resulted in favorable changes in platelet function, HDL cholesterol, and BP. The results indicate that regular consumption of berries may play a role in the prevention of cardiovascular disease.

Anthocyanin supplementation improves serum LDL- and HDL-cholesterol concentrations associated with the inhibition of cholesteryl ester transfer protein in dyslipidemic subjects

American Journal of Clinical Nutrition, doi:10.3945/ajcn.2009.27814 Vol. 90, No. 3, 485-492, September 2009 Yu Qin, Min Xia, Jing Ma, YuanTao Hao, Jing Liu, HaiYing Mou, Li Cao and WenHua Ling

Abstract Conclusion

. . . . Anthocyanin supplementation in humans improves LDL- and HDL-cholesterol concentrations and enhances cellular cholesterol efflux to serum. These benefits may be due to the inhibition of CETP.

Prebiotic/Probiotic Effects

Individual and combined effects of foods on *helicobacter pylori* growth

Phytotherapy Research Early View (pre-publication) Jacqueline I. Keenan, Nina Salm, Mark B. Hampton, Alison J. Wallace

Abstract Conclusion

. . . . It was found that foods with measurable anti-*H. pylori* activity have an effect greater in combination than the sum of foods tested singly, and that this was most noticeable with a combination of broccoli sprouts and blackcurrant oil. . . .

Prebiotic use of fruits and fruit juices in the promotion of beneficial gut microflora

International Patent No. WO/2005/092127 granted 2005 Clifford M, Gibson G, Hu H, Rodig-Penman A Glaxo Group Limited

Invention Extract

. . . . The invention is also directed to the use of the dark fruit or dark fruit juice for the manufacture of an orally ingestable composition to promote health by promoting the growth of beneficial gut microflora. . . .

Herpes Infection Prevention & Fibromyalgia Treatment

Anti-herpesvirus activity of an extract of Ribes nigrum L. Phytotherapy Research Volume 17, Issue 6, Date: June 2003, Pages: 609-613 Tatsuo Suzutani, Masahiro Ogasawara, Itsuro Yoshida, Masanobu Azuma, Yoko M. Knox

Abstract Conclusion

. . . . The extract inhibited herpes simplex virus type 1 attachment on the cell membrane completely at a 100-fold dilution, as well as the plaque formation of herpes simplex virus types 1 and 2, and varicella-zoster virus by 50% at a 400-fold dilution or lower concentrations. . . .

Food Supplements in the Treatment of Primary Fibromyalgia: A Double-blind, Crossover Trial of Anthocyanidins and Placebo

Journal of Nutritional & Environmental Medicine Volume 10, Issue 3 September 2000 , pages 189 – 199 A. M. Edwards, L. Blackburn, S. Christie, S. Townsend, J. David

Abstract Conclusion

. . . . **Conclusions:** This trial of anthocyanidins in the treatment of primary fibromyalgia has shown small but statistically significant benefits at a dose of 80 mg day - 1 , the dose that is recommended for these substances to be used as a food supplement. It may therefore be worthwhile patients suffering from this difficult chronic condition undergoing an individual therapeutic trial. . . .