



miessence®

BERRY RADICAL™ fact sheet



Hello Lovely People!

With so many questions about this amazing product I have put together this resource full of all the wonderful properties of Berry Radical.

Enjoy!

Narelle

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What Is Berry Radical?

Today's fast-food society and nutrient deficient soil makes it difficult, if not impossible, to obtain the quality and concentrations of daily nutrients necessary to positively impact our health. Berry Radical is a revolutionary, organic superfood designed to assist the body in attaining vibrant health, wellbeing and longevity. The ingredients in Berry Radical have been proven to assist the body in neutralising free radical damage. Make a super nutritious beverage by blending Berry Radical with hot water and rice or soy milk, and sweeten to taste. Add to your favourite smoothie recipe to supercharge it! Dairy milk should be avoided with Berry Radical as research has shown that the casein in dairy milk blocks the beneficial vascular effects of the antioxidants.

What Are Berry Radical's Benefits?

- A potent combination of 9 of the world's most effective, antioxidant superfoods
- Contains certified organic, antioxidant-rich raw cacao (chocolate), fruits and berries to support healthy immune function and protect cells
- Contains a wide spectrum of nature's most powerful antioxidants: hydroxytyrosol, zeaxanthin, alpha and beta-carotene, lutein, lycopene, anthocyanin, cryptoxanthin, xanthophyll, epicatechin, quercetin, punicalagins and ellagic acid, chlorogenic, gallic, ferulic and caffeic acids from organically grown chocolate, berries and fruits
- Helps quench damaging free radicals in the body
- May slow processes associated with aging
- Supports healthy immune function

Berry Radical Ingredients

- certified organic, raw, unrefined cacao powder
- raw coffee fruit extract
- certified organic, freeze-dried olive juice extract
- certified organic, freeze-dried pomegranate powder
- certified organic, freeze-dried goji berry powder
- certified organic, freeze-dried acai berry powder
- certified organic, freeze-dried blueberry powder
- certified organic, freeze-dried raspberry powder
- certified organic, freeze-dried strawberry powder



Why Do Plants Contain Antioxidants?

Photosynthesis is the process whereby plants convert light energy from the sun into stored physical energy. Photosynthesis exposes plants to a massive number of free radicals. Plants produce antioxidants to protect themselves from damage by free radicals. Antioxidant plant pigments, primarily carotenoids and polyphenols that are responsible for the bright colours of many orange, red, blue, and purple fruits, berries, and algae, provide most of this protection. Research has shown that human ingestion of these plant-based antioxidants results in similar protection. Research also shows that antioxidants work synergistically - the combined effect is greater than the sum of the individual effects - and are far more effective when a spectrum of antioxidants are ingested, rather than individual isolated compounds.

What Are Free Radicals and Why Do We Need Antioxidants?

Oxidation occurs when free radicals (highly reactive, high-energy particles) ricochet wildly throughout the body and damage cells. Free radicals can be produced within the body by natural biological processes or introduced from outside via tobacco smoke, toxins, pollutants, and sub-optimal eating habits. Free radicals are believed to accelerate the progression of cancer, cardiovascular disease, rheumatoid arthritis, chronic fatigue, and age-related diseases. Antioxidants found in fruits and vegetables help to neutralise free radicals in our bodies.

What Are ORAC Units and How Many Do We Need?

ORAC, short for Oxygen Radical Absorbance Capacity, is a standardised measurement of the total antioxidant power of a substance. Antioxidant power is the ability to neutralize oxygen free radicals. The more free radicals a substance can absorb, the higher its ORAC score. Nutritionists recommend that we consume around 5000 ORAC units per day to significantly impact antioxidant activity in the body and reduce free radical damage. One serving (half a cup) of fruits or vegetables provides approximately 500 ORAC units. If you're not eating at least 10 servings of fruits and vegetables a day, you're not getting the recommended amount of daily ORAC units to mop-up the damage caused by free radicals in your body. The ORAC (total) score of 1 gram of Berry Radical is 1,175. So one 3.5g serving of Berry Radical contains over 4000 ORAC units! One 105g tub contains 123,375 ORAC units.

Comparison With Other Sources of Antioxidants

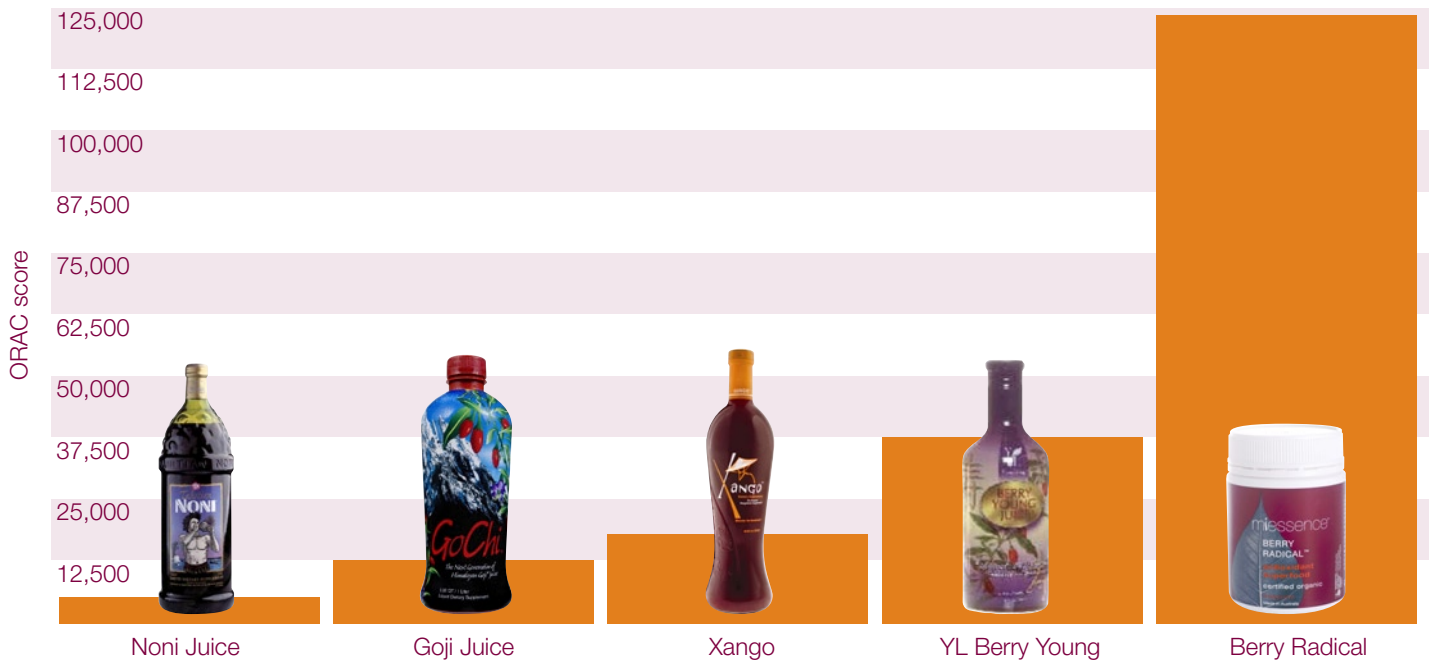
Published Data of the ORAC Score of Other High Antioxidant Foods and Supplements

Food/Supplement	ORAC Score / Serving
100g Blueberries	2400
100g Strawberries	1540
100g Raspberries	1220
30ml YL Berry Young	1130
30ml Xango	530
30ml Himalayan Goji Juice	380
30ml Tahitian Noni Juice	165
105g Miessence Berry Radical	123,375

Comparison of How Many Other Antioxidant Foods and Supplements You'd Have to Buy to Get the Equivalent ORAC Units Contained in One Tub of Berry Radical

Food/Supplement	Equivalent Quantity	Cost (approximate US\$)
Blueberries	5 kilos	\$200
Strawberries	8 kilos	\$180
Raspberries	10 kilos	\$500
YL Berry Young	4 bottles	\$216
Xango Mangosteen juice	8 bottles	\$320
Himalayan Goji juice	11 bottles	\$578
Tahitian Noni juice	25 bottles	\$1053
Miessence Berry Radical	1 tub	\$63

ORAC Comparison of Antioxidant Products



Food vs. Supplements

If you're supplementing with single dose antioxidants, or a combination of a few isolated antioxidant nutrients, you may not be getting the benefits you hoped for.

While isolated nutrients may have powerful antioxidant benefits in vitro (test tube), they rarely have significant benefits in vivo (humans). Conversely, foods high in antioxidants have proven benefits in both humans and in vitro. It is known that a diet rich in fruits and vegetables can help prevent cancers, coronary heart disease, and strokes. Synthetic antioxidants appear to be so ineffective that they may actually increase cancer risk. In fact, every large clinical trial that has used isolated antioxidant nutrients has failed to show benefits for cancer or cardiovascular disease. ^{61,62,63,64}

Most isolated antioxidant nutrients are chemically and structurally different to those found in foods, and do not have the desired effect in the human body. Research has found that whole tomato powder but not lycopene, a carotenoid found in tomatoes, inhibited prostate carcinogenesis in rats, which demonstrates the superior functionality and efficacy of whole food nutrition compared with high dose, isolated nutrient supplementation. ⁶⁵

How Much Caffeine Does Berry Radical Contain?

Interesting research on caffeine in the field of homeopathy indicates caffeine's stimulating effect when cooked, but not when eaten raw. One experiment conducted with a decoction of roasted ground cacao beans in boiling water produced an excitement of the nervous system similar to that caused by black coffee, and an excited state of circulation demonstrated by an accelerated pulse. Notably, when the same decoction was made with raw, unroasted cacao beans, neither effect was noticeable.

A cup of tea contains an average of 40mg of caffeine, compared to 85mg as found in a cup of freshly brewed coffee. A cup of hot chocolate usually contains about 4 or 5 milligrams of caffeine, which is about 1/20 that of a cup of regular coffee. A serving of Berry Radical contains about 6mg of caffeine, about as much as in a hot chocolate, but considering the coffee berry and cacao in Berry Radical are both raw, there will be no stimulant effect.

Why a Powder Instead of a Juice?

By utilising raw, freeze-dried powders, we have concentrated all the nutrition from the fruits and berries into a much more potent, nutrient dense form. This is why 1 container of Berry Radical is equivalent to 9 bottles of mangosteen juice, 12 bottles of goji juice, and 29 bottles of noni juice, in terms of antioxidant capacity. Our organic fruit and berry powders are highly concentrated foods, with all the nutrients and enzymes contained in the fresh fruit. Only water has been removed. Gram for gram, powders are far more potent and concentrated than watered-down juices. Many fruits are more than 90 percent water, which means you get at least 10 times the nutrients in a freeze-dried fruit than the fresh fruit or rehydrated juice. Powders don't require the preservatives that juices do. The freeze drying process doesn't kill the enzymes. It puts them in a state of suspended animation. They are brought back to life by adding the Berry Radical to liquid.

Our certified organic cacao powder is cold-pressed from the cacao beans without solvents, then fine-milled and sifted so the most bioavailable cacao particles filter into the final product. As the temperature is never allowed to exceed 40°C, the powder is considered a raw food with all heat-sensitive vitamins, minerals, and antioxidants remaining intact, thereby maximizing digestion and absorption.

CuppaRadical

Serves 1

1 x heaped teaspoon Berry Radical

1 x teaspoon organic raw sugar

hot water

organic milk/cream of choice



BAR shake (Banana Anti-Radical)

(Best hangover cure ever – works in 5 minutes!)

Serves 2

2 x heaped teaspoons Berry Radical

1 x tablespoon organic honey

1 x organic banana

250 ml organic milk of choice



Mix together in a blender (preferably rinse out the leftover alcohol from last night's daiquiris first!) Bananas contain sugar in the form of fructose. They also contain potassium, which is one of the nutrients you lose the most when you drink alcohol. Bananas have a natural antacid effect that helps with nausea. Their high magnesium content (along with the cacao in Berry Radical) helps relax pounding blood vessels that cause a hangover headache.

Chai Radical

Serves 2

2 x heaped teaspoons of Berry Radical

1 x small can of coconut cream (270ml)

Pinch of each to taste (allspice, black pepper, cardamon, cinnamon, cloves, coriander, ginger, nutmeg, star anise, fennel)

1 x bay leaf

1 x vanilla bean

1 x tablespoon honey

270ml water (fill empty coconut milk can with water)



Gently simmer spices, coconut milk, and water over low heat for 10 minutes to infuse flavours.

When ready to serve, add Berry Radical and stir well.

Pour through tea strainer into big mugs.

Narelle's Radical Raw Smoothie

I'm often asked how I use Berry Radical in my daily life, besides making the scrumptious warm beverage.

I have a supercharged way to start my day; it's my organic, raw, green smoothie. It's a delicious, nourishing meal that keeps me going until lunchtime.

1 x baby green coconut (juice and flesh)

½ cup of fruit of the season (paw paw, mango, peaches, pears, berries)

1 x banana

1 x handful of goji berries

1 x tsp bee pollen granules

1 x tsp maca root powder

2 x tsp In-Liven

1 x heaped teaspoons Berry Radical

1 x tbs spirulina (or chlorella)

1 x tbs barley grass (or wheat grass)

2 x tbs crushed linseed (or chia seed)

1 x big handfull of spinach (or other leafy green)

1 x tbs flax oil (or evening primrose or hemp, or good EFA blend)

2 x tbs undenatured whey protein

Blend in a powerful blender (like a vitamix or ice-tank) until smooth, creamy and green!

Additional hint: to crush the linseeds or chia seeds, purchase an inexpensive coffee grinder from your local supermarket.



1. Raw Cacao (Chocolate!)

Grown and harvested ethically and sustainably in Ecuador, raw cacao contains the antioxidants, polyphenols, catechin, epicatechin, and gallic acid. Epicatechin and its metabolites have been singled out as providing cacao's vasodilation benefits, which help protect against thrombosis formation and hypertension. Cacao provides significant protection to cardiovascular health and has been found to provide more than 21 times the free radical protection of green tea. [1](#), [2](#), [3](#), [4](#), [5](#), [6](#), [7](#), [8](#)



Cacao and Magnesium

Cacao is believed to be the richest source of magnesium of any common food. Magnesium is one of the most important minerals in the body and is the number one mineral that assists and supports healthy heart functioning. It is vital for over 300 enzyme systems in the body – more than iron and zinc combined, yet nearly 70% of the population is deficient in magnesium. Many experts believe that even with a healthy diet, produce may still be grown in mineral-depleted soil and lacking in this vital nutrient. Studies have shown magnesium may have a beneficial effect on the cardiovascular system. Low magnesium levels have also been found in patients who have died from heart attacks. Magnesium has also been found to be beneficial in asthma, where it promotes relaxation of the bronchial smooth muscle. Magnesium may help prevent calcium crystallising in the kidneys to create kidney stones. Magnesium deficiency is strongly implicated in PMS. Symptoms like abdominal bloating, breast pain, headaches, fatigue, fluid retention, mood swings, insomnia, and anxiety are all symptoms of magnesium deficiency and PMS! Magnesium supplementation is as important as calcium supplementation in the treatment and prevention of osteoporosis. It helps the body metabolise calcium and converts dietary vitamin D to an active form. Magnesium is also beneficial for gastric disturbances (heartburn and flatulence) as it neutralises stomach acid, converting it to magnesium chloride. With less acid available, less gas is produced, resulting in alleviation of the symptoms. Magnesium may also help relieve constipation by relieving pressure on the bowel and allowing fluid to soften bowel movements. Studies have found magnesium supplementation may help relieve tension headaches, muscle tension, and associated pain and cramps. Low magnesium levels have also been found in chronic migraine sufferers.

2. Raw Coffee Fruit Concentrate

Like many plants, coffee distributes its powerful nutrition throughout the whole fruit, not just the seed. Whole coffee fruit is loaded with high concentrations of beneficial antioxidants and other extraordinary nutrients, including polyphenols, chlorogenic, caffeic and ferulic acids. Coffee plants grow on the slopes of high-altitude, volcanic mountainsides. Nourished by mineral-rich soil and warmed by intense tropical sunlight, coffee plants produce a profusion of wonderful, bright red fruit. Coffee fruit is exceptionally rich in antioxidants because it grows in high altitude, low-latitude regions where the sun's rays are strongest. As the plants mature, they develop powerful antioxidants to protect them from damage caused by high doses of the sun's radiation and the natural byproducts of photosynthesis. One gram of our coffee berry provides the same free radical protection of over two kilograms of grapes. [9](#),[10](#)



Raw Coffee Fruit Concentrate and Glyconutrition

The whole coffee fruit also contains many healthy poly-, oligo- and five of the eight essential mono-saccharides. Polysaccharides, such as mannans and arabinogalactans, make up nearly 50% of the coffee berry. Conventional roasting destroys these nutrients, so they're not found in traditional coffee. We all know that carbohydrates provide the 'fuel' we use to run our bodies. Until recently, it was thought that energy creation was the only role carbohydrates played in our body. During the last few years, however, emerging science has suggested that eight carbohydrates: Mannose, Galactose, Fucose, Xylose, Glucose, Sialic acid, N-Acetylglucosamine, and N-Acetylgalactosamine are essential to life because they are the basic building blocks of all biological communication. Scientists believe that this family of eight mono-saccharides is essential in order for our immune systems to function properly. Coffee berry releases unusually high levels of mannose, galactose, fucose, xylose, arabinose, and glucose during digestion.

3. AçaiBerry

Wild harvested sustainably and fairly from the Amazon Forest, the powerful purple berry, Açai (ah-sigh-ee) contains the potent antioxidant, anthocyanins. Anthocyanins are a group of phytochemicals found in red wine that are thought to contribute to the French Paradox, i.e. that France has one of the lowest incidences of heart disease of any western society despite the prevalence of smoking and a diet high in saturated fat and cholesterol. Açai contains the potent antioxidant, anthocyanins, at 10-30 times the concentration found in red wine. Other potential physiological effects of anthocyanins include radiation-protective, chemoprotective, vasoprotective, and anti-inflammatory agents. [11](#),[12](#),[13](#)



4. Goji Berry

The 'red diamond' of Traditional Chinese Medicine for over 2000 years, Goji Berry contains the powerful carotenoid antioxidants, zeaxanthin, beta-carotene, lutein, lycopene, cryptoxanthin, and xanthophyll. Carotenoids are thought to protect against cardiovascular and inflammatory diseases, vision-related diseases such as age-related macular degeneration and glaucoma, and are anticancer agents. [14,15,16,17,18](#)



5. Blueberry

Blueberry contains the polyphenolic antioxidant, anthocyanins. Anthocyanins, which are flavonoids, were found in one study to have the strongest antioxidant power of 150 flavonoids tested. Anthocyanins have been shown to exhibit anti-inflammatory properties and protect both large and small blood vessels from oxidative damage, including those in the eyes. [19,20,21,22](#)



6. Raspberry

Raspberry contains the polyphenol antioxidant, ellagic acid, which has been shown to reduce heart disease, birth defects, liver problems, and promote wound healing. Ellagic acid may help inhibit different types of cancer causing agents, including aflatoxin and nitrosamines. Ellagic acid seems to have some anti-cancer properties and has been found to cause death in cancer cells in the lab. [23,24,25,26](#)



7. Strawberry

Strawberry is a rich source of the polyphenol antioxidants, quercetin, ellagic acid, and anthocyanin. Quercetin has been shown to protect colon, breast, ovarian, and gastrointestinal cells against cancer growth. Quercetin has also been shown to protect against strokes, cataracts, viruses, and allergies. [27,28,29,30](#)



8. Pomegranate

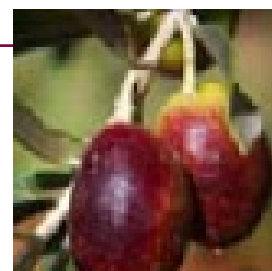
Pomegranate contains the polyphenol antioxidants, punicalagins and ellagic acid. Research suggests that pomegranate may be beneficial for arteriosclerosis, heart disease, osteoarthritis, and prostate cancer. [31,32,33,34,35,36,37,38](#)



9. Olive

Olive contains antioxidant polyphenols extracted from the pulp of fresh, organically grown olives. Hydroxytyrosol is the natural olive polyphenol with the highest level of free radical protection activity ever reported for any natural antioxidant compound!

While the olive has received most attention for its oil, until now the olive water, or juice, has been a mere byproduct of olive production. In fact, disposal of the juice has been costly for the industry. The olive is only 15-20% oil and more than 50% juice. So what have we been throwing away? The unfortunate answer is olive polyphenols, especially Hydroxytyrosol, a highly potent and protective antioxidant. In fact, polyphenols are much more prevalent in the olive juice than in the oil. Yet it is these unique polyphenols that are considered responsible for the health benefits in extra virgin olive oil. Imagine the antioxidant capacity of olive juice with up to 300 times more polyphenols than the oil! [39,40,41,42,43,44,45](#)



1. Lee KW, Kim YJ, Lee HJ, Lee CY. "Cocoa has more phenolic phytochemicals and a higher antioxidant capacity than teas and red wine." Department of Food Science and Technology, School of Agricultural Biotechnology, Seoul National University, Seoul 151-742, South Korea. *J Agric Food Chem.* 2003 Dec 3;51(25):7292-5
2. Vinson JA, Proch J, Bose P, Muchler S, Taffera P, Shuta D, Samman N, Agbor GA. "Chocolate is a powerful ex vivo and in vivo antioxidant, an antiatherosclerotic agent in an animal model, and a significant contributor to antioxidants in the European and American Diets." *J Agric Food Chem.* 2006 Oct 18;54(21):8071-6.
3. Francis ST, Head K, Morris PG, Macdonald IA. "The effect of flavanol-rich cocoa on the fMRI response to a cognitive task in healthy young people." *J Cardiovasc Pharmacol.* 2006;47 Suppl 2:S215-20.
4. Selmi C, Mao TK, Keen CL, Schmitz HH, Eric Gershwin M. "The anti-inflammatory properties of cocoa flavanols." *J Cardiovasc Pharmacol.* 2006;47 Suppl 2:S163-71
5. Vlachopoulos C, Aznaouridis K, Alexopoulos N, Economou E, Andreadou I, Stefanadis C. "Effect of dark chocolate on arterial function in healthy individuals." *Am J Hypertens.* 2005 Jun;18(6):785-91.
6. Keen CL, Holt RR, Oteiza PI, Fraga CG, Schmitz HH. "Cocoa antioxidants and cardiovascular health." *Am J Clin Nutr.* 2005 Jan;81(1 Suppl):298S-303S.
7. Osakabe N, Yamagishi M, Natsume M, Yasuda A, Osawa T. "Ingestion of proanthocyanidins derived from cacao inhibits diabetes-induced cataract formation in rats." *Exp Biol Med (Maywood).* 2004 Jan;229(1):33-9.
8. Carnesecchi S, Schneider Y, Lazarus SA, Coehlo D, Gosse F, Raul F. "Flavanols and procyanidins of cocoa and chocolate inhibit growth and polyamine biosynthesis of human colonic cancer cells." *Cancer Lett.* 2002 Jan 25;175(2):147-55.
9. Lee WJ, Zhu BT. "Inhibition of DNA methylation by caffeic acid and chlorogenic acid, two common catechol-containing coffee polyphenols." *Carcinogenesis.* 2006 Feb;27(2):269-77. Epub 2005 Aug 4.
10. Daglia M, Racchi M, Papetti A, Lanni C, Govoni S, Gazzani G. J. "In vitro and ex vivo antihydroxyl radical activity of green and roasted coffee." *Agric Food Chem.* 2004 Mar 24;52(6):1700-4.
11. Hong W, Cao G, Prior P. "Oxygen Radical Absorbance Capacity of Anthocyanins." *J. Agric. Food Chem.* 45, 304-309, 1997
12. Kong JM, Chia LS, Goh NK, Chia TF, Brouillard R. "Analysis and biological activities of anthocyanins." *Phytochemistry.* 2003 Nov;64(5):923-33
13. Schauss AG, Wu X, Prior RL, Ou B, Patel D, Huang D, Kababick JP. "Phytochemical and nutrient composition of the freeze-dried amazonian palm berry, *Euterpe oleracea* mart. (acai)." *J Agric Food Chem.* 2006 Nov 1;54(22):8598-603.
14. Li XM, Ma YL, Liu XJ. "Effect of the *Lycium barbarum* polysaccharides on age-related oxidative stress in aged mice." *J Ethnopharmacol.* 2006 Dec 28.
15. Wu H, Guo H, Zhao R. "Effect of *Lycium barbarum* polysaccharide on the improvement of antioxidant ability and DNA damage in NIDDM rats." *Yakugaku Zasshi.* 2006 May;126(5):365-71.
16. Zhang M, Chen H, Huang J, Li Z, Zhu C, Zhang S. "Effect of *lycium barbarum* polysaccharide on human hepatoma QGY7703 cells: inhibition of proliferation and induction of apoptosis." *Life Sci.* 2005 Mar 18;76(18):2115-24.
17. Chan HC, Chang RC, Koon-Ching Ip A, Chiu K, Yuen WH, Zee SY, So KF. "Neuroprotective effects of *Lycium barbarum* Lynn on protecting retinal ganglion cells in an ocular hypertension model of glaucoma." *Exp Neurol.* 2007 Jan;203(1):269-73.
18. Cheng CY, Chung WY, Szeto YT, Benzie IF. "Fasting plasma zeaxanthin response to *Fructus barbarum* L. (wolfberry; *Kei Tze*) in a food-based human supplementation trial." *Br J Nutr.* 2005 Jan;93(1):123-30.
19. Bell DR, Gochenaur K. "Direct vasoactive and vasoprotective properties of anthocyanin-rich extracts." *J Appl Physiol.* 2006 Apr;100(4):1164-70.
20. Faria A, Oliveira J, Neves P, Gameiro P, Santos-Buelga C, de Freitas V, Mateus N. "Antioxidant properties of prepared blueberry (*Vaccinium myrtillus*) extracts." *J Agric Food Chem.* 2005 Aug 24;53(17):6896-902.
21. Joseph, J.A., Shukitt-Hale B., Denisova, N.A. Bielinski D., Martin, A., McEwen, J.J., & Bickford, P.C., 1999. "Reversals of age-related declines in neuronal signal transduction, cognitive, and motor behavioral deficits with blueberry, spinach, or strawberry dietary supplementation." *Journal of Neuroscience* 19 (18): 8114-8121.
22. Seeram NP, Adams LS, Zhang Y, Lee R, Sand D, Scheuller HS, Heber D. "Blackberry, black raspberry, blueberry, cranberry, red raspberry, and strawberry extracts inhibit growth and stimulate apoptosis of human cancer cells in vitro." *J Agric Food Chem.* 2006 Dec 13;54(25):9329-39.
23. Olsson ME, Gustavsson KE, Andersson S, Nilsson A, Duan RD. "Inhibition of cancer cell proliferation in vitro by fruit and berry extracts and correlations with antioxidant levels." *J Agric Food Chem.* 2004 Dec 1;52(24):7264-71.
24. Wargovich MJ. "Experimental evidence for cancer preventive elements in foods." *Cancer Lett.* 1997 Mar 19;114(1-2):11-7.
25. Devipriya N, Srinivasan M, Sudheer AR, Menon VP. "Effect of ellagic acid, a natural polyphenol, on alcohol-induced prooxidant and antioxidant imbalance: a drug dose dependent study." *Singapore Med J.* 2007 Apr;48(4):311-8.
26. Han DH, Lee MJ, Kim JH. "Antioxidant and apoptosis-inducing activities of ellagic acid." *Anticancer Res.* 2006 Sep-Oct;26(5A):3601-6.
27. Meyers KJ, Watkins CB, Pritts MP, Liu RH. "Antioxidant and antiproliferative activities of strawberries." *J Agric Food Chem.* 2003 Nov 5;51(23):6887-92.
28. Amalia PM, Possa MN, Augusto MC, Francisca LS. "Quercetin Prevents Oxidative Stress in Cirrhotic Rats." *Dig Dis Sci.* 2007 Apr 12
29. Wilms LC, Hollman PC, Boots AW, Kleinjans JC. "Protection by quercetin and quercetin-rich fruit juice against induction of oxidative DNA damage and formation of BPDE-DNA adducts in human lymphocytes." *Mutat Res.* 2005 Apr 4;582(1-2):155-62.
30. Hubbard GP, Wolfram S, Lovegrove JA, Gibbins JM. "The role of polyphenolic compounds in the diet as inhibitors of platelet function." *Proc Nutr Soc.* 2003 May;62(2):469-78.
31. Lansky EP, Newman RA. "*Punica granatum* (pomegranate) and its potential for prevention and treatment of inflammation and cancer." *J Ethnopharmacol.* 2007 Jan 19;109(2):177-206.
32. Esmailzadeh A, Tahbaz F, Gaieni I, Alavi-Majd H, Azadbakht L. "Cholesterol-lowering effect of concentrated pomegranate juice consumption in type II diabetic patients with hyperlipidemia." *Int J Vitam Nutr Res.* 2006 May;76(3):147-51.
33. Adhami VM, Mukhtar H. "Polyphenols from green tea and pomegranate for prevention of prostate cancer." *Free Radic Res.* 2006 Oct;40(10):1095-104.
34. Malik A, Mukhtar H. "Prostate cancer prevention through pomegranate fruit." *Cell Cycle.* 2006 Feb;5(4):371-3.

35. Sumner MD, Elliott-Eller M, Weidner G, Daubenmier JJ, Chew MH, Marlin R, Raisin CJ, Ornish D. "Effects of pomegranate juice consumption on myocardial perfusion in patients with coronary heart disease." *Am J Cardiol.* 2005 Sep 15;96(6):810-4.
36. Aviram M, Rosenblat M, Gaitini D, Nitecki S, Hoffman A, Dornfeld L, Volkova N, Presser D, Attias J, Liker H, Hayek T. "Pomegranate juice consumption for 3 years by patients with carotid artery stenosis reduces common carotid intima-media thickness, blood pressure and LDL oxidation." *Clin Nutr.* 2004 Jun;23(3):423-33.
37. Aviram M, Dornfeld L. "Pomegranate juice consumption inhibits serum angiotensin converting enzyme activity and reduces systolic blood pressure." *Atherosclerosis* 2001 Sep;158(1):195-8
38. Ahmed S, Wang N, Hafeez BB, Cheruvu VK, Haqqi TM. "Punica granatum L. extract inhibits IL-1beta-induced expression of matrix metalloproteinases by inhibiting the activation of MAP kinases and NF-kappaB in human chondrocytes in vitro." *J Nutr.* 2005 Sep;135(9):2096-102.
39. Visioli F., Bellomo G., and Galli C. "Free radical-scavenging properties of olive oil polyphenols," *Biochemical and Biophysical Research Communications* 1998, 247 60-64.
40. Fabiani R., De Bartolomeo A., Rosignoli P., et al. "Cancer chemoprevention by hydroxytyrosol isolated from virgin olive oil through G1 cell cycle arrest and apoptosis." *Eur J Cancer Prev* 2002, 11(4) 351-8.
41. Visioli F., Galli C., Plasmati E., et al. "Olive phenol hydroxytyrosol prevents passive smoking-induced oxidative stress." *Circulation* 2000, 102 2169-2171.
42. Manna C., Della Ragione F., Cucciolla V., et al. "Biological effects of hydroxytyrosol, a polyphenol from olive oil endowed with antioxidant activity." *Advances in Nutrition and Cancer* 2, Plenum Publishers, NY 1999, 115-30.
43. Etienne N, Alonso MG, de Pascual-Teresa S, Minihane AM, Weinberg PD, Rimbach G. "Antioxidant and anti-atherogenic activities of olive oil phenolics." *Int J Vitam Nutr Res.* 2005 Jan;75(1):61-70.
44. D'Angelo S, Ingrosso D, Migliardi V, Sorrentino A, Donnarumma G, Baroni A, Masella L, Tufano MA, Zappia M, Galletti P. "Hydroxytyrosol, a natural antioxidant from olive oil, prevents protein damage induced by long-wave ultraviolet radiation in melanoma cells." *Free Radic Biol Med.* 2005 Apr 1;38(7):908-19.
45. Manna C, Galletti P, Cucciolla V, Montedoro G, Zappia V. "Olive oil hydroxytyrosol protects human erythrocytes against oxidative damages." *J Nutr Biochem.* 1999 Mar;10(3):159-65.
46. Astley SB, Hughes DA, Wright AJ, Elliott RM & Southon S (2004). "DNA damage and susceptibility to oxidative damage in lymphocytes: effects of carotenoids in vitro and in vivo." *Br J Nutr*, Jan, 91, 1, 53-61.
47. Knekt P, Heliovaara M, Rissanen A, Aromaa A & Aaran R K (1992). "Serum antioxidant vitamins and risk of cataract." *BMJ*, Dec 5, 305, 6866, 1392-4.
48. Van Poppel G (1996). "Epidemiological evidence for beta-carotene in prevention of cancer and cardiovascular disease." *Eur J Clin Nutr*, Jul, 50 Suppl 3, S57-61.
49. Chidambara Murthy KN, Vanitha A, Rajesha J, Mahadeva Swamy M, Sowmya PR, Ravishankar GA. "In vivo antioxidant activity of carotenoids from *Dunaliella salina*--a green microalga." *Life Sci.* 2005 Feb 4;76(12):1381-90. Epub 2005 Jan 18.
50. Xue LX. "Experimental study on extract of *Dunaliella salina* in preventing NSAR-induced cancer of proventriculus in mice" *Zhonghua Yu Fang Yi Xue Za Zhi.* 1993 Nov;27(6):350-3.
51. Cerhan JR, Saag KG, Merlino LA, Mikuls TR, Criswell LA. "Antioxidant micronutrients and risk of rheumatoid arthritis in a cohort of older women." *Am J Epidemiol.* 2003 Feb 15;157(4):345-54.
52. Nishino H, Murakoshi M, Ii T, Takemura M, Kuchide M, Kanazawa M, Mou XY, Wada S, Masuda M, Ohsaka Y, Yogosawa S, Satomi Y, Jinno K. "Carotenoids in cancer chemoprevention." *Cancer Metastasis Rev.* 2002;21(3-4):257-64.
53. Fung TT, Spiegelman D, Egan KM, Giovannucci E, Hunter DJ, Willett WC. "Vitamin and carotenoid intake and risk of squamous cell carcinoma of the skin." *Int J Cancer.* 2003 Jan 1;103(1):110-5.
54. Holick CN, Michaud DS, Stolzenberg-Solomon R, Mayne ST, Pietinen P, Taylor PR, Virtamo J, Albanes D. "Dietary carotenoids, serum beta-carotene, and retinol and risk of lung cancer in the alpha-tocopherol, beta-carotene cohort study." *Am J Epidemiol.* 2002 Sep 15;156(6):536-47.
55. Gale CR, Hall NF, Phillips DI, Martyn CN. "Plasma antioxidant vitamins and carotenoids and age-related cataract." *Ophthalmology.* 2001 Nov;108(11):1992-8.
56. Lu QY, Hung JC, Heber D, Go VL, Reuter VE, Cordon-Cardo C, Scher HI, Marshall JR, Zhang ZF. "Inverse associations between plasma lycopene and other carotenoids and prostate cancer." *Cancer Epidemiol Biomarkers Prev.* 2001 Jul;10(7):749-56.
57. Toniolo P, Van Kappel AL, Akhmedkhanov A, Ferrari P, Kato I, Shore RE, Riboli E. "Serum carotenoids and breast cancer." *Am J Epidemiol.* 2001 Jun 15;153(12):1142-7.
58. Nishino H, Tokuda H, Murakoshi M, Satomi Y, Masuda M, Onozuka M, Yamaguchi S, Takayasu J, Tsuruta J, Okuda M, Khachik F, Narisawa T, Takasuka N, Yano M. "Cancer prevention by natural carotenoids." *Biofactors.* 2000;13(1-4):89-94.
59. Rumi G Jr, Szabo I, Vincze A, Matus Z, Toth G, Mozsik G. "Decrease of serum carotenoids in Crohn's disease." *J Physiol Paris.* 2000 Mar-Apr;94(2):159-61.
60. Franke AA, Harwood PJ, Shimamoto T, Lumeng S, Zhang LX, Bertram JS, Wilkens LR, Le Marchand L, Cooney RV. "Effects of micronutrients and antioxidants on lipid peroxidation in human plasma and in cell culture." *Cancer Lett.* 1994 Apr 29;79(1):17-26.
61. Francheschi S, Parpinel M, La Vecchia C, Favero A, Talamini R, Negri E. Role of different types of vegetables and fruit in the prevention of cancer of the colon, rectum, and breast. *Epidemiology* 1998;9(3):338-341
62. Rautalahti M, Huttunen J. Antioxidants and carcinogenesis. *Ann Med* 1993;25:435-441
63. Paolini M, Abdel-Rahman SZ, Sapone A, Pedulli GF, Perocco P, Cantelli-Forti G, Legator MS. Beta-carotene: a cancer chemopreventive agent or a co-carcinogen? *Mutat Res.* 2003;543(3):195-200
64. Van Duyn MS and Pivonka E. Overview of the health benefits of fruit and vegetable consumption for the dietetics professional: selected literature. *J Am Diet Assoc.* 2000;100:1511-1521.
65. Boileau TW, Liao Z, Kim S, et al. Prostate carcinogenesis in N-methyl-N-nitrosourea (NMU)-testosterone-treated rats fed tomato powder, lycopene, or energy-restricted diets. *J Natl Cancer Inst.* 2003;95(21):1578-1586.