Neuroprotection by Berry-enriched Diets: Panacea or Methodological Conundrum?

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> **Multiple Sclerosis (MS), a neurodegenerative disease resulting from autoimmune destruction of myelin, is associated with progressive physical disability as well as fatigue, cognitive dysfunction and depression. Although MS has varied presentations and progressions, inflammation is a common element found in all disease states. Treatment strategies that decrease inflammation would be expected to improve symptoms and/or slow disease progression. Blueberries contain high levels of the antioxidant anthocyanin flavonoids and have been reported to possess immunomodulatory and anti-inflammatory properties in multiple models of aging and neurodegeneration.**
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> **…Disease incidence was decreased 40% in blueberry-supplemented animals. Whereas no mortality was noted in the blueberry-supplemented mice, 16% of non-supplemented mice succumbed to EAE. Blueberry supplementation also was associated with decreased cumulative and final disease scores…These data strongly suggest that dietary supplementation with WBBP can reduce disease incidence and severity but that the mechanism behind such protection is complex and must be determined before WBBP can be used in human MS trials.**

EAE = Experimental Autoimmune Encephalomyelitis

WBBP = freeze dried blueberry powder

The mice were fed a rodent chow supplemented with about 1% WBBP. Higher quantities of WBBP did not result in superior results, which indicate an indirect effect of anthocyanins of the immune system. In other words, eating dark berries triggers some complex defense mechanism in the body or helps the immune system to better balance and regulate itself.

The consumer cannot wait on medical research to provide all the answers before acting to improve his/her life today through better diet. Dark berries decrease inflammation and positive help the body to repair itself in ways not fully understood yet. Elderberry has demonstrated substantially higher concentrations of these valuable nutrient compounds than blueberries.

The consumer should consume at least some dark berries or pure berry juice almost every day. Since no one knows precisely how much is best to deal with the various auto-immune diseases and aging, we are left to try different whole natural foods/juices in varying amounts for some reasonably extended time (weeks to months) and discover our personal results. Since the “mechanisms behind such protection is complex” whole foods would seem to be a superior alternative to extracted supplements.