

Retinal blood flow abstract Nagaki Yasunori

Title;The Effect of
Astaxanthin on Retinal
Capillary Blood Flow in
Normal Volunteers

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Abstract;Objective: We evaluated the effect of astaxanthin on retinal circulation in healthy volunteers. Design A double blind randomized placebo controlled study. Methods: Thirty-six volunteers were randomized into two groups: Astaxanthin group that consisted of 18 subjects who received oral astaxanthin, 6mg/day, for 4 weeks and a placebo group that consisted of 18 subjects who received an identical looking oral placebo for 4 weeks. Retinal capillary blood flow was measured by the Heidelberg Retina Flowmeter. Changes in blood pressure, blood cell counts, fasting plasma glucose level, fasting plasma astaxanthin level, retinal capillary blood flow, intraocular pressure, inquiry about eye strain were examined before and after supplementation in both groups. Results: The fasting plasma astaxanthin level in the astaxanthin group was significantly ($P<0.001$) higher than before supplementation. The fasting plasma astaxanthin level in the placebo group after placebo treatment remained unchanged. After 4 weeks supplementation, retinal capillary blood flow in the astaxanthin group was significantly ($P<0.01$) higher than before supplementation in both eyes, while retinal capillary blood flow in the placebo group after placebo treatment was unchanged. Intraocular pressures in both groups remained unchanged during the supplementation period. Conclusion: Our results suggest that astaxanthin supplementation may increase retinal capillary blood flow.