

Accommodation and Asthenopia abstract Nagaki

Title;The supplementation
effect of Astaxanthin on
Accommodation and
Asthenopia

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Abstract;This double blind randomized placebo controlled study examined the supplementation effects of Haematococcus (H) pluvialis derived astaxanthin on subjects suffering from visual display terminal (VDT) induced visual fatigue. Subjects were divided into two groups: 6 mg astaxanthin treated and placebo groups. Furthermore, the safety of astaxanthin intake was simultaneously assessed. After the 4 week supplementation period, the groups' visual accommodation was evaluated as well as a subjective questionnaire designed to evaluate visual asthenopia (eye fatigue). Twenty five subjects of the astaxanthin treated group and 23 subjects of the placebo group were examined for eye fatigue. For safety evaluation, 31 treated subjects and 28 placebo subjects were analysed. We report the following observations: 1. In the astaxanthin treated group, the change of accommodation before and after supplementation significantly improved compared with the placebo group. 2. The astaxanthin supplemented group exhibited a significant rate of change in the accommodation compared with the placebo group. 3. The subjective questionnaire evaluating visual asthenopia revealed a marked reduction in "heavy head" claims. Other typical improvements of fatigue symptoms included "dimness of sight" and "stiff shoulders and back". 4. No significant differences were detected between the treatment and the placebo groups after 4 weeks of supplementation in the safety parameters analyzed, and adverse event. These results suggest that 6 mg of astaxanthin per day from a H. pluvialis algal extract can improve eye fatigue. Moreover, astaxanthin can be safely consumed at this level by healthy

adults. (author abst.)