

Accommodation and asthenopia dosage abstract Nitta

Title;Effects of Astaxanthin on
Accommodation and
Asthenopia-Dose Finding
Study in Healthy Volunteers-

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Abstract;A double-blind study was conducted in healthy volunteers to objectively evaluate the optimum dose and safety of astaxanthin (AX) on accommodation and asthenopia. The subjects were divided into 3 groups: 0mg (AX 0mg group), 6mg (AX 6mg group) and 12mg (AX 12mg group) of astaxanthin administered. Ten subjects, total thirty subjects were included in each group. Mean time consumed for close working (e.g., VDT working) was approximately 7 hours a day. The testing food was given to the subjects for 4 weeks. Then, the subjects were traced for 4 weeks and assessed by comparison of the observed values between pre- and post-dosing. As a result 1. Objective accommodation power of the AX 12mg group was significantly increased compared to that of pre-dosing. 2. Positive accommodation time was significantly shortened in the AX 6mg and the 12mg groups compared to those of pre-dosing, and negative accommodation time was significantly shortened in the AX 0mg and the 6mg groups compared to those of pre-dosing. 3. According to the assessment by VAS, many parameters in subjective symptoms were improved in the AX 6mg group. 4. No changes were noted in laboratory tests of controversial in clinical setting due to AX uptake. Also, there were no adverse events

caused by the administration of the testing food. In conclusion, accommodation power and subjective symptoms relating asthenopia were improved by taking 6mg/day of astaxanthin, therefore more than 6mg/day was considered to be optimal dosage of astaxanthin.