

Eye strain abstract Tsuneto

Title;Effects of
Astaxanthin on Eyestrain
Induced by
Accommodative
Dysfunction

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Journal Title;Journal of the Eye

Journal Code;Y0754A

ISSN;0910-1810

VOL.23;NO.6;PAGE.829-834(2006)

Figure&Table&Reference;FIG.3, TBL.2, REF.25

Pub. Country;Japan

Language;Japanese

Abstract;We investigated effects of astaxanthin on eyestrain induced by accommodative dysfunction. The 10 healthy subjects received 6mg/day of astaxanthin (Ax group) or 0mg/day (placebo; P group) for 14 days, and were then assigned a near visual task for 20min. Accommodative function and subjective symptoms relating to eyestrain were measured before and after the task, and after the 10-minute rest following the task. The data were then compared between Ax and P groups by the double-blind cross-over method. After the task, accommodation contraction and relaxation times were extended in both the Ax and P groups. Comparison between the two groups showed that after the task, accommodation relaxation time was significantly extended in P group, in contrast to Ax. Accommodative contraction and relaxation times were significantly prolonged after the 10-minute rest in P group as compared to Ax. The symptoms eye fatigue, eye heaviness, blurred vision and eye dryness in P group were increased, but Ax group showed increased in eye fatigue and eye heaviness. On the basis of these results, we concluded that astaxanthin has the effects of reducing and preventing eyestrain induced by accommodative dysfunction.