

第 7 回国際フードファクター学会 (ICoFF2019)

「アスタキサンチン(AstaZine®) + トコトリエノール(TheraPrimE™) 摂取 による認知機能改善」について発表のお知らせ

この度、当社製品「AstaZine®」と「TheraPrimE™」を配合した試験食を用いてヒト臨床試験を実施した結果、総合記憶力・言語記憶力の改善とアンケート「ここ 1 週間、ヒトやモノの名前を思い出すのに苦労しますか。」という問いに対して改善することを確認致しました。本試験は記憶力に衰えを感じている健常な日本人成人男女を対象とした試験となっており、本結果を第 7 回国際フードファクター学会 (ICoFF2019) にてポスター発表致しました。

学会発表概要

- 学会名 : 第 7 回国際フードファクター学会 (ICoFF2019)
- 題目 : Cognitive function improvement with astaxanthin and tocotrienols intake
-A randomized, double-blind, placebo-controlled study-

試験の概要や結果につきましては、次ページの資料をご確認ください。
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以上

Cognitive function improvement with astaxanthin and tocotrienols intake

-A randomized, double-blind, placebo-controlled study-

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Objectives

This study examined the effects of mixed ingestion of astaxanthin derived from *Haematococcus pluvialis* (*H.pluvialis*) and tocotrienols on cognitive function in healthy Japanese adults.

Method

Test Method : Randomized placebo-controlled double-blind parallel group study
Subjects : Healthy Japanese males and females who feel a memory decline (mean age, 55 years)
Allocation : 22 persons in each Astaxanthin or placebo group
Dosage : The test soft capsules included **AT (astaxanthin 9 mg, tocotrienol 50 mg, BGG Japan Co., Ltd)**, 1 capsule/day during or after the breakfast.
Period : 12 weeks (summer 2018)
Test item : Cognitive Function Test by Cognitrix, and original surveys



Cognitrix

• Total Memory (Verbal memory + Visual memory)

1.Verbal memory test

2.Visual memory test



※Verbal memory test (require 3 minutes)

- A word is displayed in 2 seconds interval (total 15 words)
- Choose words that were displayed before among 30 words which includes new words that were not displayed. (instant)
- The same procedure will be repeated after all the tests (delayed)

Table1. Subjects'background information

	AT group(n=18)	P group(n=18)	P Value
Age(years)	55.4 ± 7.9	54.6 ± 6.9	0.721
MMSE(points)	29.2 ± 1.0	29.4 ± 0.8	0.373
IgE(RIST) (IU/mL)	146.5 ± 181.1	176.1 ± 244.1	0.683

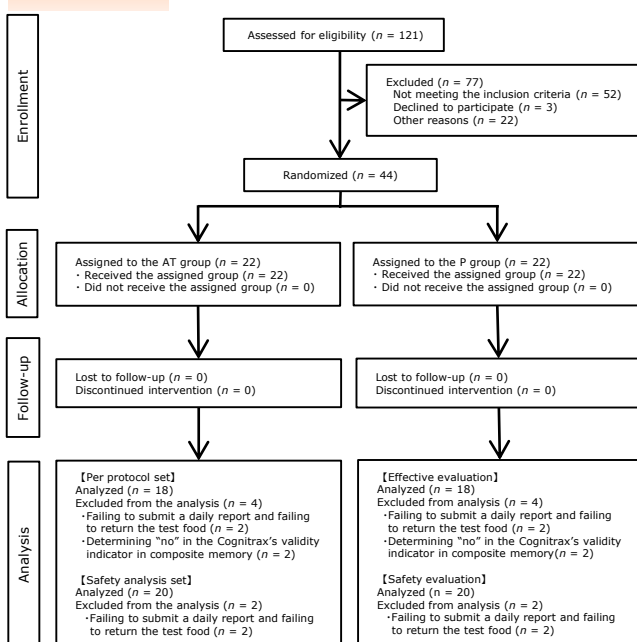
Table2. Subjects'age distribution

Age (years)	AT group(n=18)		P group(n=18)	
	Men (n)	Women (n)	Men (n)	Women (n)
40-49	0	3	2	3
50-59	5	6	5	6
60-69	3	0	1	0
≥ 70	0	1	0	1

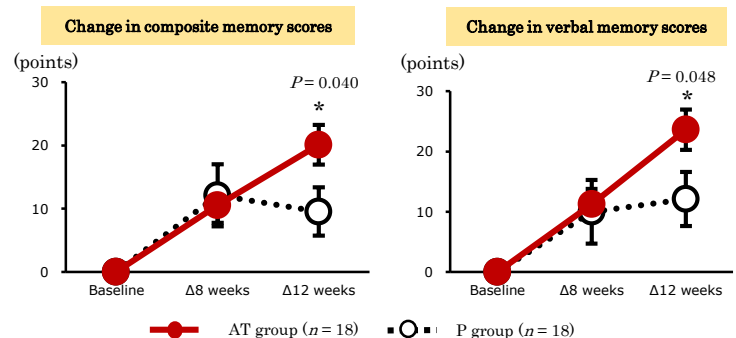
Conclusion

The results of this study showed that ingestion of a combination of **AT (9 mg/day astaxanthin and 50 mg/day tocotrienol)** for 12 weeks maintained and **improved cognitive function by improving the composite and verbal memory** in Japanese adults who feel a memory decline.

Flow chart

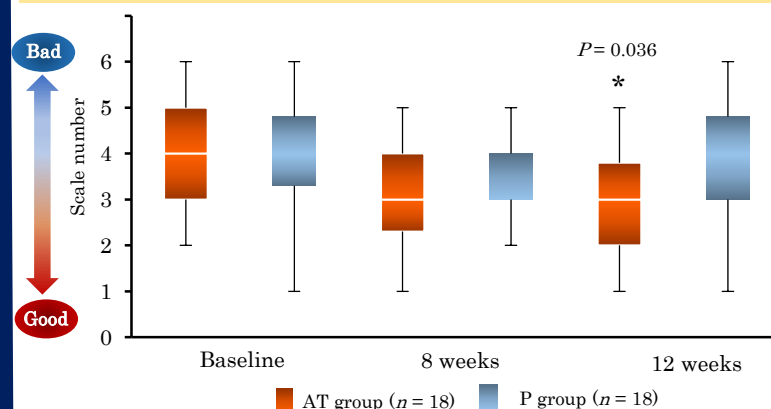


Results



In the evaluation of subjective symptoms, the question of

"During the last week have you had trouble remembering people's name or the names of things?"



Mechanism

Astaxanthin has antioxidant properties and plays a role in the protection of oxidative damage through a variety of mechanisms, including elimination of singlet oxygen and radicals, suppression of lipid peroxidation, and regulation of gene expression associated with oxidative stress. Previous studies in vitro have shown that astaxanthin exerts a neuroprotective effect against Aβ toxicity. Additionally, clinical research has reported that astaxanthin improves antioxidant capacity and improves antioxidant status in red blood cells. Astaxanthin is specifically absorbed into the blood and can cross the blood-brain barrier in rats, suggesting that it is effective in preventing various disorders caused by reactive oxygen species in brain nerve cells.

