CASE STUDY

metavate
Thought Leading Natural Health

Pycnogenol® for cognitive enhancement

Company
Horphag (Switzerland)

Problem/opportunity
Pycnogenol® is a special extract from French Maritime Pine bark. It is a condensed flavonoid which is mainly composed of procyanidins. It has been used to treat a variety of conditions but had not been carefully studied in terms of its effect on cognition using a randomized controlled trial design. Given its powerful antioxidant properties we were interested to examine whether we could establish whether reducing oxidative stress resulted in improved cognition.

Solution
We conducted a randomised controlled trial in which 101 participants, matched for dietary flavonoid intake, were given either 150 mg Pycnogenol® daily or placebo for 3 months. We examined their biochemistry (F2 Isoprostanes which is a measure of oxidative stress) and their cognition at baseline, 1, 2 and 3 months.

Our role
We conceived the study with our industry sponsor (Horphag) and were responsible for all aspects of the trial including the design, recruitment, completion, analyse and publication of results.

Outcomes

Compared to placebo we observed improvements in memory in favour of the Pycnogenol® treatment coupled with a significant reduction in F2 Isoprostanes.. The results of this trial have also been replicated in a series of smaller double blind and single blind studied conducted elsewhere. This suggests that powerful antioxidants, such as Pycnogenol®, have an important role to play in improving cognitive performance, particularly in healthy participants. Our study results also led to significant funding for a much larger government trial (see the ARCLI case study).

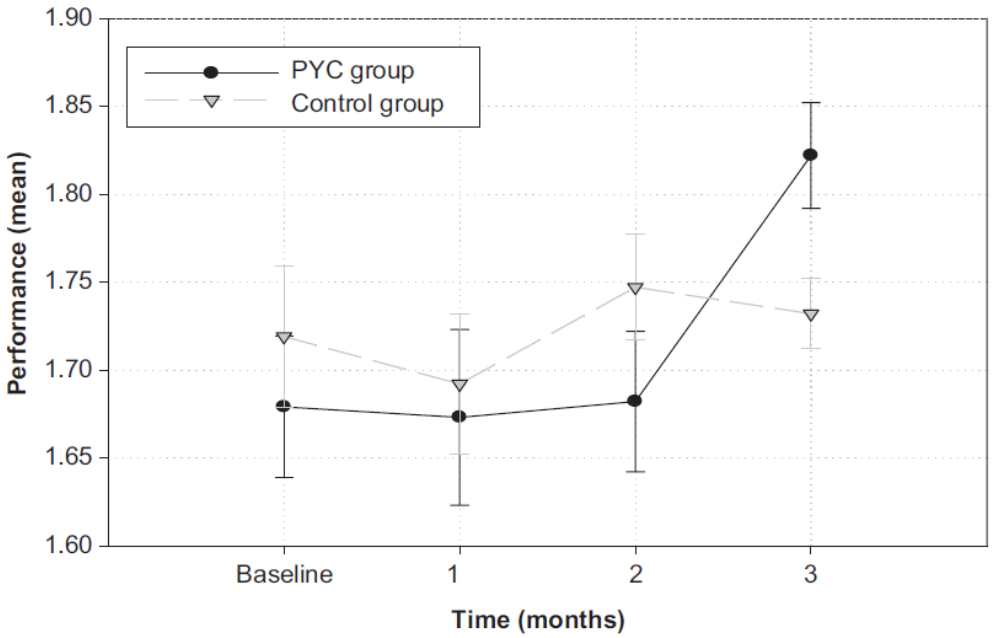

Figure 1 Quality of working memory index over treatment period for each group. Quality of working memory was significant between groups at three months ($P < 0.05$).

References

1. Ryan, J., Croft, K., Wesnes, K. & Stough, C. (2008). An Examination of the effects of the Antioxidant Pycnogenol on Cognitive Performance, Serum Lipid Profile, Endocrinological and Oxidative Stress biomarkers in an Elderly Population. Journal of Pschopharmacology, 22 (5), 553-562
2. Camfield, D.A., Nolidin, K., Savage, K., Timmer, J., Croft, K., Simpson, T., Downey, L., Scholey, A., Pipingas, A., Deleuil, S., & Stough, C. (2019). Higher plasma levels of F2-Isoprostanes are associated with slower psychomotor speed in healthy older adults. Free Radical Research, 53, 3-38.
3. Downey, L.A., Simpson, T., Timmer, J., Nolidin, K., Croft, K., Wesnes, K.A., Scholey, A Deleuil, S., Stough, C. (2018). Impaired verbal episodic memory in healthy older adults is marked by increased F2-Isoprostanes. Prostoglandins, Leukotrienes and Essential Fatty Acids, 129, 32-37.

Tags

Pycnogenol, Horphag, memory, processing speed, biomarkers, oxidative stress, clinical trial