\ RESEARCH BRIEF

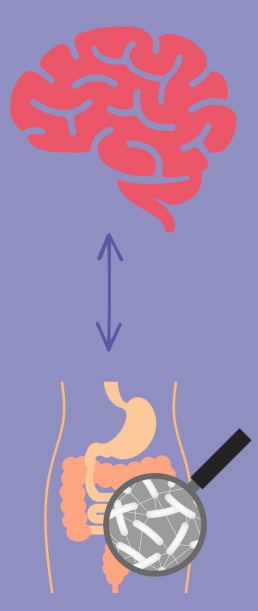
New clinical explores how PROMITOR® soluble fibre may influence cognitive performance and gut microbiota

The purpose:

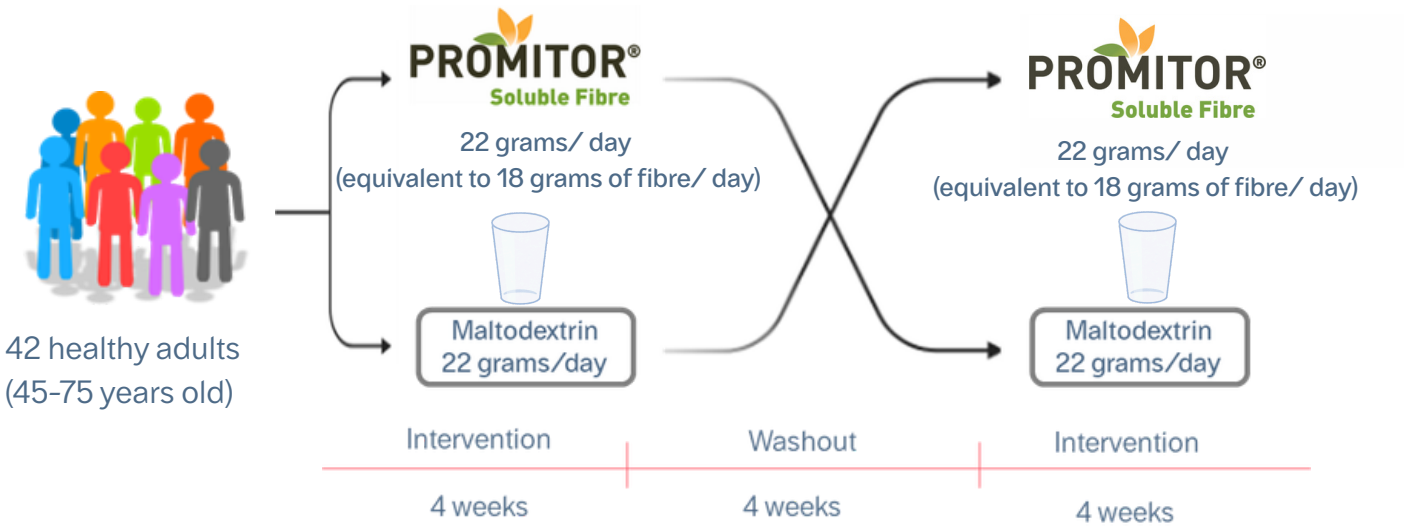
To evaluate how daily consumption of PROMITOR® Soluble Fibre influences cognitive performance and gut microbiota composition in healthy middle-aged and older adults.

Fibre's potential impact on cognitive performance.

- Fibre fosters growth of beneficial microbes present in the gut, enhancing diversity and reducing harmful bacteria [1,2].
- Fermentation of fibre produces metabolites - such as short-chain fatty acids – that are increasingly recognized as key mediators of gut-brain communication [3,4,5].
- Human trials demonstrating this connection remain limited, particularly those linking the microbiota, gut-derived metabolites, and cognitive outcomes.



The study:



- Cognitive function, mood, gastro-intestinal (GI) symptoms, gut microbiota and their metabolites were measured at baseline and post-intervention.

The results:

Cognitive performance

- PROMITOR® consumption was associated with improvements in attentional inhibition - an executive function which measures the ability to stay focused and ignore distractions.
- This skill is a core component of cognitive control that can naturally and insidiously decline with aging.

Microbiota

- PROMITOR® increased *Parabacteroides*, bacteria previously linked to anti-inflammatory effects, gut barrier protection[6,7,8], and positive gut compounds production relevant to gut-brain communication and health outcomes[9,10].

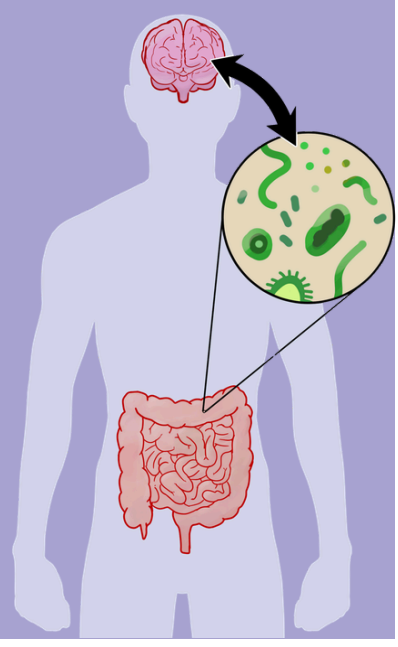
- No differences were observed in fecal SCFAs; however, this is likely due to a methodological limitation, as these compounds are rapidly absorbed in the gut and fecal levels do not accurately reflect total SCFA production. Importantly, in vitro fermentation studies consistently show that PROMITOR® increases SCFA production in adults[11,12].

Gut-brain Interaction

- While no direct link was found between specific bacteria and cognition, the results suggest that PROMITOR®'s cognitive benefits may partly involve *Parabacteroides*.

- PROMITOR® consistently increases *Parabacteroides*.

- Participants who showed small increases in Parabacteroides experienced greater improvements in attentional inhibition.



The conclusion:

- This study demonstrates that PROMITOR® consumption can positively influence specific cognitive functions in healthy middle-aged and older adults.

- Consistent with previous research, PROMITOR® stimulated the growth of beneficial gut bacteria, increasing those previously linked to bioactive metabolite pathways relevant to brain health.

- Although a direct microbiota-to-cognition pathway was not identified, exploratory analyses suggest that PROMITOR®-related cognitive effects may be partly influenced by *Parabacteroides* abundance.

- This is the first clinical study to evaluate the effects of PROMITOR® Soluble Fibre on cognitive function and investigate the mechanisms behind potential cognitive benefits in middle-aged and older adults.

- This study aligns with the ISAPP criteria by demonstrating prebiotic effects related to the gut-brain axis, thereby providing further evidence of PROMITOR®'s prebiotic benefits in this context[13].

References

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