



## MEDIA RELEASE

# **New research supports the role of cows' milk in improving cognitive function and quality of life in older adults with mild cognitive impairment and that A1 protein free milk may provide enhanced outcomes**

**Tuesday 8th July 2025: A multi-centre, double-blinded, randomised controlled Clinical Study published in [The Journal of Nutrition, Health and Aging](#) found daily consumption of two serves of ordinary skim milk (ORD) or A1 protein free skim milk (A1PF) over 3 months was beneficial to a broad range of cognitive measures in 88 milk tolerant Chinese adults, aged 65-75 years with mild cognitive impairment (MCI). Further, participants who consumed A1 protein free milk showed a greater improvement in a range of cognitive measures and in their reported quality of life.<sup>1</sup> Further research is warranted to confirm these benefits to other population demographics.**

Building on previous research, the primary study objectives sought to examine if ordinary milk containing the A1 protein compared to A1 protein free milk could improve aspects of cognition measured by way of Subtle Cognitive Impairment Test (SCIT), and investigate potential linkages with changes in serum levels of the antioxidant glutathione (GSH).<sup>1,2</sup> Secondary objectives included additional cognitive function assessments, self-reported quality of life measures<sup>5</sup>, muscle strength using the hand grip scale, inflammatory and immune markers, and vitamin D levels. Additional cognitive assessment was conducted by two widely accepted clinical tools, the Montreal Cognitive Assessment (MoCA)<sup>3</sup> and Audio Verbal Learning Test (AVLT).<sup>4</sup>

A1 protein free milk differs from ordinary cows' milk. Beta-casein makes up approximately 30% of the protein in cows' milk.<sup>8</sup> These beta-casein proteins can be grouped into two types, A1 and A2.<sup>8</sup> Ordinary milk contains both A1 and A2-type proteins, whereas A1 protein free milk naturally only contains A2-type proteins. Though the A1 and A2-types are classified by reference to only a single amino acid in the sequence of 209 amino acids that make up the protein, this subtle difference has a material impact on its breakdown during digestion, as milk free from A1 protein may be easier on digestion for some people.<sup>8</sup>

Both milk groups demonstrated significant improvements across all three cognitive tests.<sup>1</sup> However, no significant changes were observed in serum GSH levels or inflammatory markers, suggesting alternative mechanisms underpinning these benefits. Both groups had severe vitamin D deficiency at baseline, which is common in older people living in China<sup>9</sup>. The authors speculated enhanced vitamin D absorption may be involved as both groups showed a significant increase in serum vitamin D levels from baseline. However, participants still had vitamin D levels below recommended levels at the end of the study.<sup>1</sup>

The research reported a 23% reduction in total error rate for the A1 protein free group on the SCIT test, a significant finding and similar to the outcome for the ordinary milk group. However, the research reported earlier improvement amongst the A1 protein free group for this measure.

Whilst both milk groups demonstrated improvements in all cognitive test scores, study participants in the A1 protein free group achieved significantly better scores in secondary cognitive measures,



the MoCA and AVLT cognitive tests.<sup>1</sup> These tests measure cognitive domains such as executive function, memory, and attention. The results were:

- MoCA results: A1PF group +20% improvement compared to 9% improvement in ORD group<sup>1</sup>
- AVLT results: A1PF group +22% improvement compared to 12% improvement in ORD group<sup>1</sup>

These findings underscore the potential of milk choice in shaping cognitive outcomes in vulnerable older adults with MCI<sup>1</sup>. Other studies investigating the relationship between beta-casein type and cognitive outcomes reported stronger outcomes on aspects of cognition for A1 protein free groups in milk intolerant preschool children<sup>6</sup> and adult<sup>7</sup> populations. These studies hypothesised different mechanisms of action, so further research is needed to confirm results and mechanism.

While both milk groups showed improvements in quality of life, participants consuming A1 protein free milk experienced significantly greater gains at the end of the study, including:

- Increase in overall quality of life scores by 23% A1PF vs 17% ORD<sup>1</sup>
- Improvement in memory ability by 43% A1PF vs 33% ORD<sup>1</sup>
- Improvement in self-care ability by 15% A1PF vs 11% ORD<sup>1</sup>
- Improvement in sleep quality by 27% A1PF vs 22% ORD<sup>1</sup>

With Australia's ageing population<sup>10</sup>, there is an increased need to embrace lifestyle changes that support cognitive health and quality of life. It is estimated that around 840,000 Australians — approximately 20% of those aged older than 65 years — may be living with MCI<sup>11</sup>, a condition characterised by subtle changes to cognitive health that can affect quality of life. Cognitive health refers to the brain's capacity to think, learn, remember, and perform everyday tasks that are essential for communication, decision-making, and social engagement.<sup>12</sup> While symptoms are mild, MCI can influence quality of life and for some people it can progress to degenerative conditions such as Alzheimer's disease<sup>12</sup>; however, progression is not inevitable.<sup>14</sup> Lifestyle changes can influence the progression of MCI, including adopting a balanced and nutritious diet.<sup>14</sup>

**Professor Stephen Robinson, researcher at RMIT University and corresponding author of the clinical study**, says that the new data represents a promising step forward in understanding how nutrition can play a role in supporting and preserving cognition as we age.

"The most important finding from this study was that milk in general has benefits when consumed regularly by healthy older adults. While the group that received the A1PF milk showed a stronger effect in comparison to ordinary milk, we saw important overall effects of dairy milk on aspects of cognitive performance, reported quality of life and vitamin D levels," said Professor Robinson.

"We hope that through further research into the regular consumption of dairy milk, which can be an easy addition to our daily diets, we will be able to better understand the longer-term health benefits."

**Dr Emma Beckett, food and nutrition scientist at FOODiQ**, says A1PF milk, as part of a balanced diet, can play a valuable role in improving the nutrition of older adults.

"This is an exciting study because it shows that a small dietary change, adding A1PF milk, may be effective for those experiencing cognitive changes. As Australia's population continues to age, A1PF



milk may offer an accessible way to support overall health and wellbeing, particularly in adults living with MCI,” said Dr Beckett.

**Dr Andrew Clarke, Chief Scientific Advisor at The a2 Milk Company** says that the latest research reflects that A1PF has the potential to benefit all life stages and could be a superior option to ordinary milk in some contexts.

“The outcome of this research is consistent with the hypothesis that A1PF milk may enhance the benefits contained in milk, notably with respect to cognitive function. Importantly, the study highlights the potential for improving aspects of health and quality of life for the elderly through nutritional as opposed to pharmaceutical solutions,” said Dr Clarke.

To learn more about the research and benefits of A1PF milk, visit <https://a2milk.com.au/A1-protein-free-explained>

## ENDS

This media release was distributed on behalf of The a2 Milk Company which funded the research. For all media enquiries, please contact Palin Communications:

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### About The a2 Milk Company

The a2 Milk Company was founded in 2000 in New Zealand by Dr. Corran McLachlan after scientific research suggested that proteins in milk may affect some people differently. *a2 Milk™* comes from cows that naturally produce milk containing only A2-type protein and no A1 protein. Published research suggests *a2 Milk™* may help some people avoid digestive discomfort. For more information, visit [a2milk.com.au](https://a2milk.com.au)

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