



Feasibility study: Effect of virgin coconut oil to enhance the cognition, brain functions and quality of life in older adults diagnosed with mild to moderate dementia



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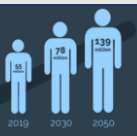
Global Impact of Dementia



Every 3 seconds
someone develops
Dementia worldwide



The total estimated
annual worldwide cost of
dementia - over US \$ 1.3
trillion, forecast to rise to
US\$ 2.8 trillion by 2030



Estimated growth in
number of people with
dementia 2019-2050-
139 million. 3,6,7

Limited Data on Human Studies

Promising strategy : Self-
management approaches & utilisation
of non-pharmacological oral nutritional
supplements.

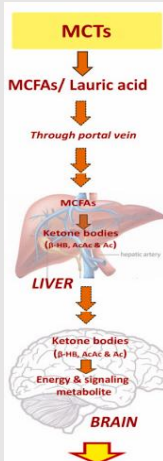
Studies so far : Studies conducted on
Virgin Coconut Oil (VCO) and its
benefits on Alzheimer's disease

Shortcoming : Cellular, animal & very
few human studies

Significance

- VCO is rich in medium – chain fatty acids (MCFA).
- MCFA are unique - easily absorbed by the liver - converted into ketones.
- Ketone bodies are important alternative source of energy for the brain.
- Early stages of Dementia -- glucose hypo metabolism -- these ketone bodies could be helpful for individuals developing or already having memory impairment. 1,2,4,5

VCO Metabolism



Aim of Study

The overall aim of this feasibility study is to
evaluate the feasibility acceptance and
adherence of VCO as a self -management
approach in ILWD & MCI.

Feasibility Objective

To understand whether the study design
would accurately assess the effectiveness of
the intervention, sample size required,
appropriate outcome measures, best way to
recruit the participants.

Methods/Design

Proposal : A mixed- method
randomised parallel- group
exploratory study design in
community or in in-participants
settings.

Preliminary data on the size of any
effect and explore views of
participants about the study design
& for those allocated to the VCO
intervention their views o the
intervention.

Outcome Measures

To assess - Overall
cognition, Quality of life,
Dietary intake, Ketone
bodies concentration,
Verbal Memory, Verbal
Fluency, Processing
Speed, Attention and
visual Spatial memory
utilising appropriate tools.

Impact of the study

To provide evidence to develop a phase III
study, systematically evaluate the data,
develop an intervention that may possibly
enhance cognition, brain functions and
improve or maintain quality of life for longer
by delaying the development of dementia in
ILWD, assist the ILWD to understand self-
care/ management options. This self-
management interventions could reduce
hospitalisation and lower the national
financial burden by improving overall well-
being and independence.

Stages of Study

Stage 1 - To review and critically evaluate the literature
on the utilization of VCO as self-management approach
in ILWD and individual with MCI

Stage 2 - Conduct Delphi Survey model validity, for
the feasibility study.

Stage 3– Mixed methods – both quantitative and
qualitative components will be analyzed by
conducting the study.

Proposed steps in Stage 3

- Initial Contact – Informed consent. Information (20min).
- First Visit T0- Memory test (50)- Questionnaire (20 min), Ketone test (5 min), 4- day food test
- Randomisation T1- Group allocation- VCO+ Standard care or Standard care, receive VCO
- Follow up after 6 weeks T2- Memory tests (50 min), Ketone test (5min), Questionnaire (10min), 4-day food dairy (20 min)
- Final Visit 12 weeks – T3 Memory tests (50 min), Ketone test (5min), Questionnaire (10min), 4-day food dairy (20 min), Interview or Focus group (60 min)

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