The olive tree – nature's ancient source of health and wellness

Presentation from the Olive Wellness Institute Advisory Panel Chair – Catherine Itsiopoulos

Hort Innovation
Strategic levy investment

OLIVE FUND

About the Olive Wellness Institute

OUR STORY

The Olive Wellness Institute is a science repository on the nutrition, health and wellness benefits of olives and olive products, which is all subject to extensive peer review. The institute is guided by scientific experts that specialise in the nutrition, health and wellness benefits related to olive products

CREDIBILITY

All information developed and distributed by the Olive Wellness Institute is subject to extensive review by the Advisory Panel as a result of our evidence based, science-first approach.

EVIDENCE BASED

The Olive Wellness Institute is strictly committed to delivering evidence-based information informed by high-level research standards.

EXPERTISE

The Olive Wellness Institute is guided by leading scientists, researchers and health professionals who have research expertise in olives, olive oil and its uses in traditional diets.

Olive Wellness INSTITUTE™

OUR MISSION

To increase awareness of Extra Virgin Olive Oil and other olive products by gathering, sharing and promoting expert, credible and evidence-based information on their nutrition, health and wellness benefits.

ABOUT US – how did it start

BOUNDARY BEND LIMITED
Australia's premier olive company

- The Olive Wellness Institute™ is a social responsibility venture, sponsored by Boundary Bend Limited.
- Leading producer of premium Extra Virgin Olive Oil with olive groves and olive mills in Australia and California USA,
- Boundary Bend Limited has a focus on improving the health and wellbeing of consumers around the world through the consumption of high quality and nutritious plant-based products sourced from the olive tree.

Hort Innovation
Strategic levy investment

OLIVE FUND

- Funded by Hort Innovation, using the Olive Fund research and development levy and contributions from the Australian Government.
- Hort Innovation is the grower owned, not-for-profit research and development corporation for Australian horticulture.
- The strategic levy investment project Educating Health Professionals about Australian Olive Products OL17002 is part of the Hort Innovation Olive Fund

ADVISORY PANEL

The OWI has an expert Advisory Panel, to provide insight and guidance, and to ensure a high level of scientific direction.

The functions of the Advisory Panel members are to provide evidence-based guidance to the OWI, to ensure:

- The OWI is viewed as a highly credible, evidence based source of olive health and wellness information.
- All information that is prepared and released by OWI is credible, non-biased and scientifically sound.

Professor Catherine Itsiopoulos (Chair)

Associate Professor Mary Flynn

Dr. Simon Poole

Professor Russell Keast

Dr Michael Kingsley

Dr Selina Wang

Dr Flavia Fayet-Moore

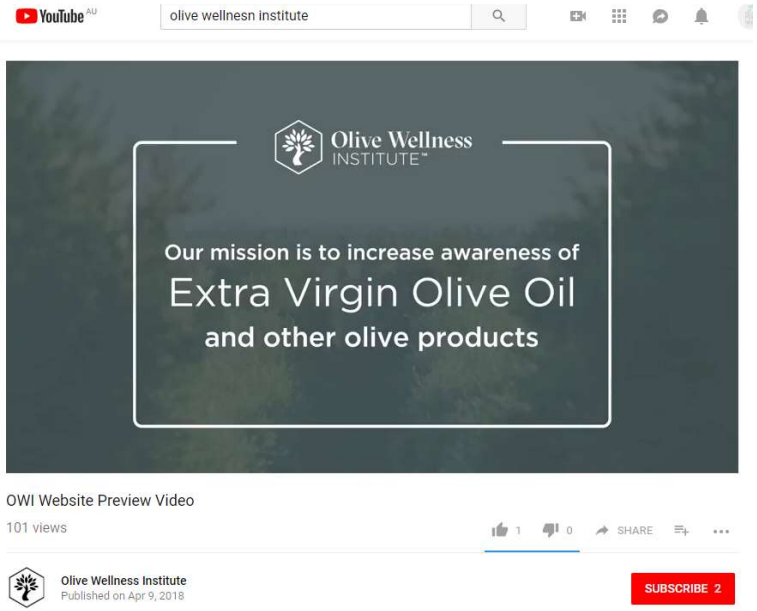
LIFESTYLE MEDICINE APPROACH

- Modern lifestyle medicine is broadly defined as an evidence based approach to the advancement of health and wellbeing through promoting the prevention of avoidable lifestyle-related diseases.
- Health professionals are increasingly advocating the principles of lifestyle medicine as epidemiologists predict a dramatic rise in the burden of chronic illnesses including cardiovascular disease, cancers, hypertension, strokes and obesity.
- In recognition of this, The World Health Organisation in 2005 called for investment in health promotion to stem the rise in premature deaths and avoid unnecessary disability due to chronic diseases.
- Lifestyle measures which can be advocated with evidence to support healthier lives include good nutrition, physical activity, stress reduction, rest, smoking cessation, and avoidance of alcohol abuse.

TrueHealth INITIATIVE
Organizational Member
TrueHealthInitiative.org

OWI has joined True Health Initiative (THI), a global voice for lifestyle as medicine. As a member organization, we are helping build a movement that supports individuals and communities in directing their resources toward this goal.

[Watch the Olive Wellness Institute Preview Video]



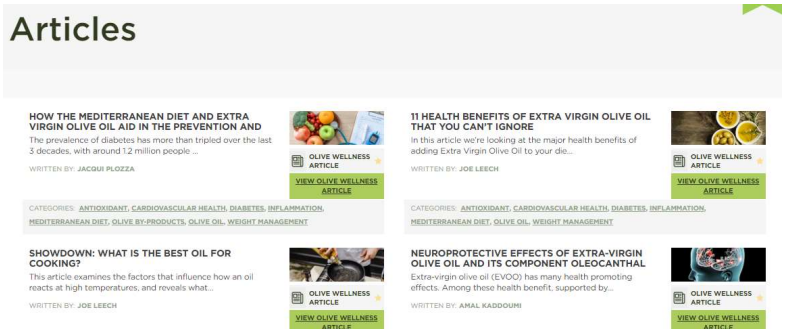
[Watch the Olive Wellness Institute Awareness Event Video]

What's available on the Olive Wellness Institute website?

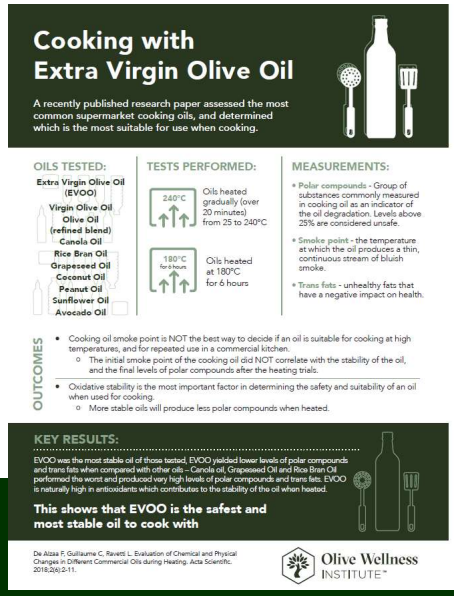
Extra Virgin Olive oil & Olive Leaf

- ✓ Health Benefits
- ✓ Grades
- ✓ Bioactive compounds
- ✓ Production
- ✓ Myths & Facts
- ✓ Fat profile

Olive Wellness Articles – a new one every week, all exclusive to the Olive Wellness Institute.



The most recent and highest level of research available on the Olive Wellness Institute Database



Downloadable Infographics

Olive Wellness INSTITUTE™

New research proves that EVOO is the safest and most stable oil to cook with

29/05/18

WRITTEN BY: Sarah Gray | CATEGORIES: Cooking, Olive Oil

New research proves that EVOO is the safest and most stable oil to cook with

Recent research conducted in an Australian oil specialist laboratory confirms that Australian Extra Virgin Olive Oil is the safest and most stable oil to cook with. Canola oil, grapeseed oil and rice bran oil, were found

ACTA SCIENTIFIC NUTRITIONAL HEALTH
Volume 2 Issue 6 June 2018
Research Article

Evaluation of Chemical and Physical Changes in Different Commercial Oils during Heating

De Alzaa F, Guillaume C* and Ravetti L

Modern Olives Laboratory Services, Australia

***Corresponding Author:** Guillaume C, Modern Olives Laboratory Services, Australia.

Received: April 03, 2018; **Published:** May 05, 2018

Abstract

When cooking oils are exposed to heat, oil degradation occurs, and by-products are produced (free fatty acids, secondary products of oxidation, polar compounds). Some by-products of oil degradation have adverse effects on health. The smoke point of an oil is believed to be correlated with the safety and stability under heat, although technical evidence to support this is limited. The aim of this study was to assess the correlation between an oil's smoke point and other chemical characteristics associated with stability/safety when heating. Analysis was undertaken in an ISO17025 accredited laboratory. Extra virgin olive oil (EVOO) and other common cooking oils were heated up to 240°C and exposed to 180°C for 6 hours, with samples assessed at various times, testing smoke point, oxidative stability, free fatty acids, polar compounds, fatty acid profiles and UV coefficients. EVOO yielded low levels of polar compounds and oxidative by-products, in contrast to the high levels of by-products generated for oils such as canola oil. EVOO's fatty acid profile and natural antioxidant content allowed the oil to remain stable when heated (unlike oils with high levels of poly-unsaturated fats (PUFAs) which degraded more readily). This study reveals that, under the conditions used in the study, smoke point does not predict oil performance when heated. Oxidative stability and UV coefficients are better predictors when combined with total level of PUFAs. Of all the oils tested, EVOO was shown to be the oil that produced the lowest level of polar compounds after being heated closely followed by coconut oil.

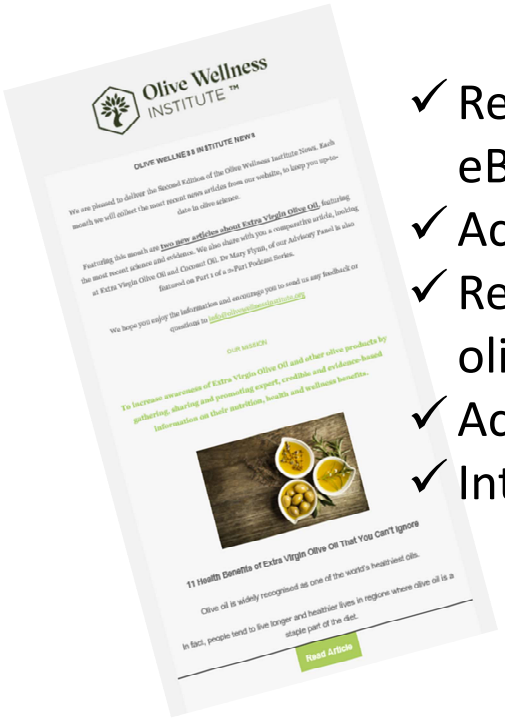
Keywords: Extra Virgin Olive Oil (EVOO); Poly Unsaturated Fats (PUFAs); Heating

What's available for Growers and Processers?

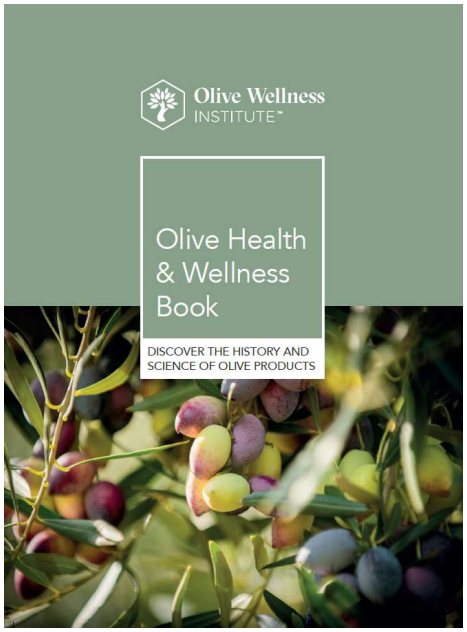
All resources are downloadable

- ✓ **Event Kit**
  - ✓ Posters for display at farmers markets or other community/health events
  - ✓ Leaflets – e.g. cooking with EVOO
  - ✓ FAQs – common EVOO questions / training manual
- ✓ **Infographics**
  - ✓ Cooking with EVOO
  - ✓ Grades of Olive Oil
  - ✓ Oil comparisons
- ✓ **Information leaflets**
- ✓ **Articles**

Sign up to the Olive Wellness Institute



- ✓ Receive a FREE Olive Health and Wellness eBook
- ✓ Access to downloadable Grower event kits
- ✓ Receive a monthly newsletter on the newest olive topics
- ✓ Access to credible and unique olive information
- ✓ Interact with the Olive community



For any information contact

info@olivewellnessinstitute.org

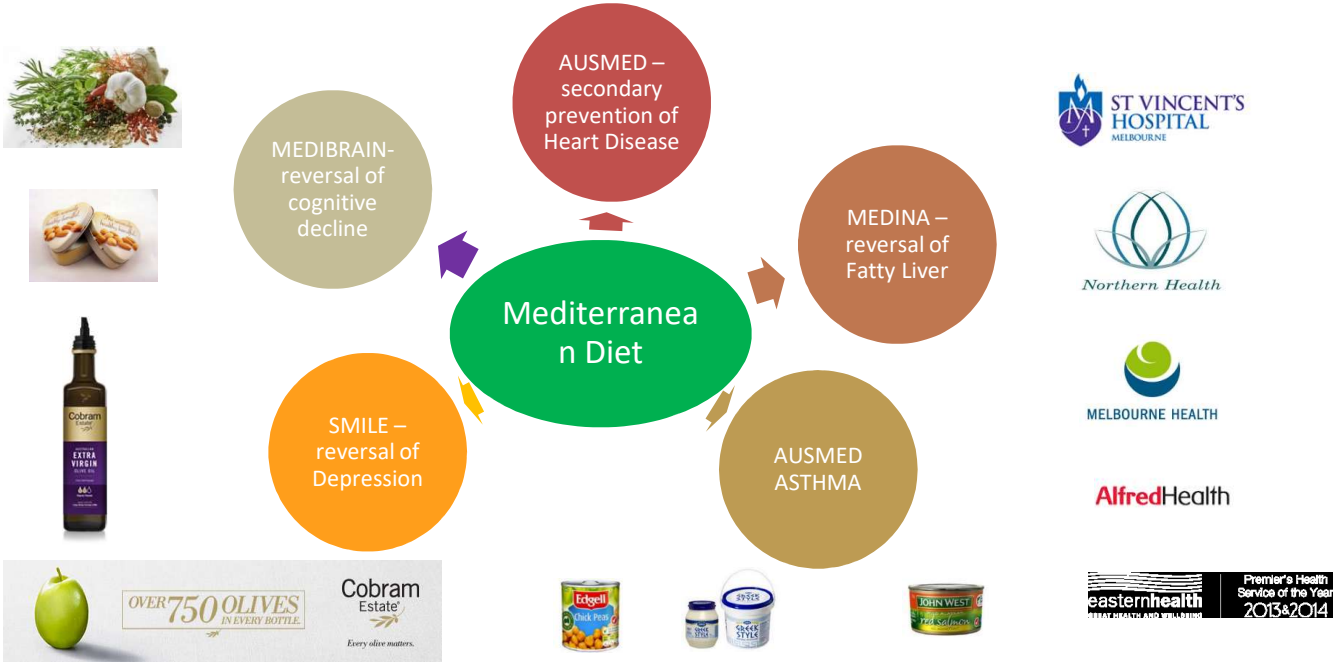
LA TROBE UNIVERSITY
All kinds of clever

Mediterranean Diet Research in Australia: The Role of EVOO

Professor Catherine Itsiopoulos
Professor of Dietetics and Human Nutrition
Head of School of Allied Health

La Trobe University Mediterranean Diet Trials in Chronic Disease Management

Multi-Centre Trials in **Collaboration with Health Services and Industry**



Professor Catherine Itsiopoulos, Head of School of Allied Health and Leader, Food for Life Research Program
Food Cluster Chair for SFWE RFA

Extra virgin olive oil is central to the Mediterranean diet

Timeline of Foods Introduced into the Mediterranean

Wild edible greens

Mediterranean Triad "wheat, wine, olive oil'

South American Influence "tomatoes, potatoes, chilies, citrus"

Considered toxic by 16C aristocrats in England 'lead poisoning'

Legumes

Ottoman Cuisine influence

"kefte, Turkish coffee"

French Cuisine influence "béchamel"

5000 BC **2000 BC** **1400s** **1500s** **1900s**

Altomare et al, Iranian J Pub Health 2013)

The Highly Palatable Traditional Mediterranean Diet:

Ideal ratio of Fat/CHO/PRO, anti-inflammatory and antioxidant rich with a low environmental footprint and economically accessible!

4:1 Plant to Animal Food Ratio

- Vit C
- Vit E
- Carotenoids
- Phytoestrogens
- Phenolics
- Allylthiosulfinates
- Flavonoids
- Selenium
- N3 fatty acids:
  - ALA and EPA DHA

Ref: Simopoulos and Sidossis. What is so special about the Greek diet? *World Rev Nutr Diet* 2000

Mediterranean Diet is a Lifestyle not just a menu

Key lifestyle features of Ikarians (Itsiopoulos et al, 2016)

- Very low levels of stress, happiness, and positivity
- no smoking (in women)
- active social life and being productive
- family coherence, eating together, lots of festivals
- physically active, walking everywhere, keeping a home garden
- **a high plant-food diet focussed on fresh local foods**
- **free range produce (goats roam free)**
- **Having purpose in life!**

European Journal of Clinical Nutrition (2017), 1–14

www.nature.com/ejcn

REVIEW

Mediterranean diet and multiple health outcomes: an umbrella review of meta-analyses of observational studies and randomised trials

M Dinu[1], G Pagliai[1], A Casini[1,2] and F Sofi[1,2,3]

↓ Alzheimer's/ Dementia

↓ CVD

↓ Diabetes

↓ Cancer Overall

↓ Neurodegenerative diseases

↓ Overall mortality

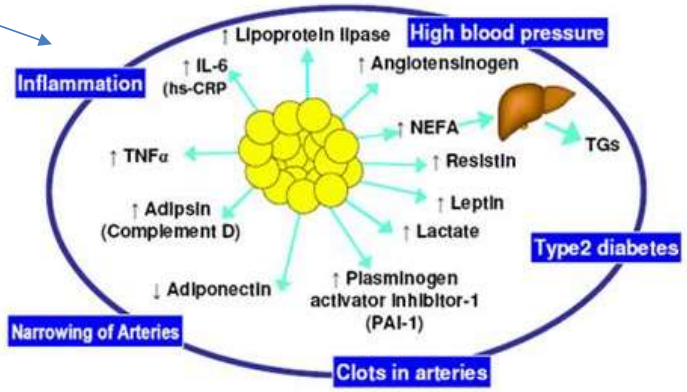
13 meta-analyses of observational studies and 16 meta-analyses of RCTs investigating link between adherence to the Mediterranean diet and 37 different health outcomes, for a total population of over than 12 800 000 subjects.

LOW GRADE INFLAMMATION IMPACTS ALL CHRONIC DISEASES

Anti-inflammatory diet

Mediterranean Diet

defence



NUTRITION RESEARCH XX (2018) XXX–XXX

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Randomization to 6-month Mediterranean diet compared with a low-fat diet leads to improvement in Dietary Inflammatory Index scores in patients with coronary heart disease: the AUSMED Heart Trial

Hannah L Mayr[a,b], *Colleen J Thomas*[c,*], *Audrey C Tierney*[a,d], *Teagan Kucianski*[a], *Elena S George*[a,e], *Miguel Ruiz-Canela*[f,g], *James R Hebert*[h,i], *Nitin Shivappa*[h,i], *Catherine Itsiopoulos*[a]

NUTRITION RESEARCH XX (2018) XXX–XXX

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Improvement in dietary inflammatory index score after 6-month dietary intervention is associated with reduction in interleukin-6 in patients with coronary heart disease: The AUSMED heart trial

Hannah L Mayr[a,b], *Catherine Itsiopoulos*[a], *Audrey C Tierney*[a,c], *Miguel Ruiz-Canela*[d,e], *James R. Hebert*[f,g], *Nitin Shivappa*[f,g], *Colleen J Thomas*[h,*]

Papamiltiadous *et al. BMC Gastroenterology* (2016) 16:14
DOI 10.1186/s12876-016-0426-3

BMC Gastroenterology

STUDY PROTOCOL Open Access

A randomised controlled trial of a Mediterranean Dietary Intervention for Adults with Non Alcoholic Fatty Liver Disease (MEDINA): study protocol

Elena S. Papamiltiadous[1*], Stuart K. Roberts[2], Amanda J. Nicoll[3], Marno C. Ryan[4], Catherine Itsiopoulos[1], Agus Salim[5] and Audrey C. Tierney[1,6]

nutrients

MDPI

Opinion

A Mediterranean Diet Model in Australia: Strategies for Translating the Traditional Mediterranean Diet into a Multicultural Setting

Elena S. George [1,2,*], Teagan Kucianski [1], Hannah L. Mayr [1], George Moschonis [1], Audrey C. Tierney [1,3] and Catherine Itsiopoulos [1]

Taylor & Francis

Critical Reviews in Food Science and Nutrition

ISSN: 1040-8398 (Print) 1549-7852 (Online) Journal homepage: http://www.tandfonline.com/loi/bfsn20

The effect of high-polyphenol extra virgin olive oil on cardiovascular risk factors: a systematic review and meta-analysis

Elena S George, Skye Marshall, Hannah L Mayr, Gina L Trakman, Oana A Tatucu-Babet, Annie-Claude M Lassemillante, Andrea Bramley, Anjana J Reddy, Adrienne Forsyth, Audrey C Tierney, Colleen J Thomas, Catherine Itsiopoulos & Wolfgang Marx

THE AUSMED HEART TRIAL PILOT

Zoom out (Ctrl+Minus)

ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

www.nrjournal.com

Nutrition Research

Randomization to 6-month Mediterranean diet compared with a low-fat diet leads to improvement in Dietary Inflammatory Index scores in patients with coronary heart disease: the AUSMED Heart Trial

Hannah L Mayr[a,b], *Colleen J Thomas*[c,*], *Audrey C Tierney*[a,d], *Teagan Kucianski*[a], *Elena S George*[a,e], *Miguel Ruiz-Canela*[f,g], *James R Hebert*[h,i], *Nitin Shivappa*[h,i], *Catherine Itsiopoulos*[a]

Multi-Centre Parallel RCT investigating impact of secondary prevention of MI following 6 months intervention with a Mediterranean Diet vs Low Fat Diet.

Results of pilot (n=65) 83% male, average age 62 yrs, 28% Diabetes, 41% MetSyn.

INTERNAL MEDICINE JOURNAL RACP Specialists. Together

Original Article

Non Alcoholic Fatty Liver Disease Patients Attending Two Metropolitan Hospitals in Melbourne, Australia; High Risk Status and Low Prevalence

Elena S George, Stuart K Roberts, Amanda J Nicoll, Anjana Reddy, Tonya Paris, Catherine Itsiopoulos, Audrey C Tierney

First published: 29 May 2018 | https://doi.org/10.1111/imj.13973

- A highly prevalent, asymptomatic condition leading to increased risk of end stage liver disease, hepatocellular carcinoma and all-cause mortality.
- The MEDINA Pilot (n= 25, mean age 49yrs) demonstrated that adherence to a Med diet was associated with reduced liver fat and improved insulin resistance independent of weight loss.
- Analysis of measures of functional liver outcomes pending.
- Med diet adherence was moderate compared with other cohorts (AUSMED, MEDLEY) in this middle-aged NAFLD population likely due to ‘silent’ nature of disease which may be ignored?

latrobe.edu.au

The effect of high-biophenol Olive Oil on markers of cardiovascular disease risk.

Ms Katerina Sarapis PhD Student & Siddharth Shivantha Honours Student

Supervisors: Prof.Catherine Itsiopoulos, A/Prof. George Moschonis, Dr Colleen Thomas, Prof Grant Drummond, Dr Wolfgang Marx, DR Elena George

Study Design

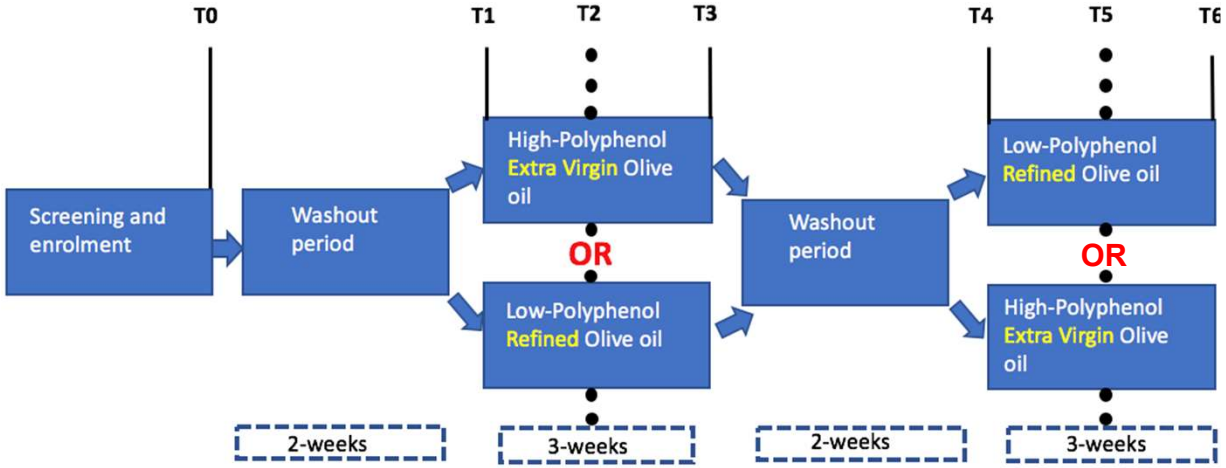
Honours Research Student:
SIDDHARTH SHIVANTHA

- **A double-blind, randomized, controlled cross-over intervention**
  La Trobe University Human Ethics Committee # HEC17067 ; Australia and New Zealand Clinical Trials Register # ACTRN12618000706279

- Healthy adult participants (n=50)

- Dose olive oil (60 ml/day)
  High-Polyphenol (320mg/kg)
  Low-Polyphenol (33mg/kg)

  ** Certified by accredited laboratory analysis*

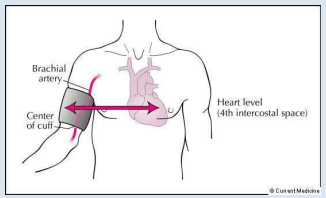


Measurements:

Anthropometry

Standard body measurements:
- body weight
- height
- Waist circumference
- Body Mass Index

Blood Pressure:
SBP and DBP
-automated BP cuff



Anti-inflammatory	Pro- inflammatory	
IL-10	CCL2	IL-8
IL-33	IFN-γ	IL-17
	IL-1b	IL-18
	IL-6*	IL-23
	IL-12	TNF-α*
		IFN-α

*Levels can predict atherosclerosis

Cobram Estate®

Significance of the Findings & Future Directions

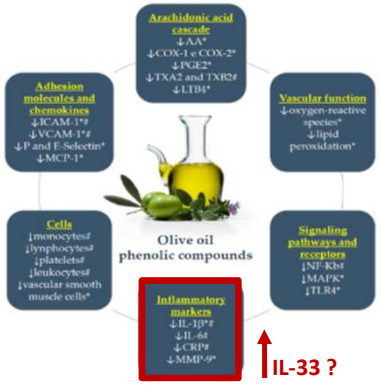
EVOO consumption significantly lowered peripheral systolic BP

First of its kind to study phenolic effect of EVOO on **IL-33 and sST2**

Larger sample size and/or **longer diet intervention** will provide more robust assessment

This study adds to the scientific evidence re: IL-33 and sST2 being the **next generation cardiac biomarkers**

Major anti-inflammatory effects of olive oil phenolic compounds



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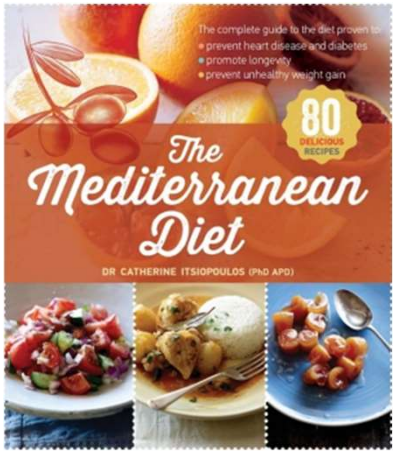
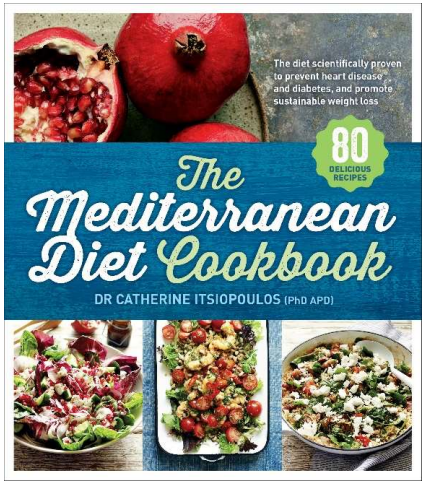
Honours Research Student:
SIDDHARTH SHIVANTHA

(Souza et al., *Nutrients* .2017. 9:E1087)

Taking Concepts to the Market- Public Education





Healthy Menu for Chronic Disease Prevention: Diabetes, Heart Disease, Stroke, Dementia

HIGH OMEGA 3 FATS, LOW IN SATURATED FATS, ANTIOXIDANT RICH	BREAKFAST	LUNCH	DINNER	SNACK
SUNDAY	Dakos (Bruchetta) Coffee (Greek/Espresso) Mandarin	Mussels stewed in white wine. Slice grain bread Greek Salad	Eggplant moussaka with lamb mince. Raddichio fennel and walnut salad.	Low Fat Greek yoghurt with berries. Sesame snack bar
MONDAY	Slice grain bread with poached egg and sliced avocado sprinkled with lemon juice and cracked pepper.	Rocket, pear and walnut salad with small tin tuna. Mandarin Plain mineral water	Baked chicken breast, skinless. Boiled broccoli salad. Small baked potato. Beetroot and garlic salad.	Low fat Greek yoghurt with walnuts and honey. Slice watermelon. Greek biscuit (koulourakia)
TUESDAY	Porridge (cooked rolled oats with skim milk) topped with fresh blueberries. Coffee (Greek/Espresso)	Stuffed vine leaves (4-6) Greek coleslaw salad. Eggplant dip	Baked snapper. Salad of boiled greens and beetroot with garlic side salad. Glass white wine	Risogalo dessert Whole orange Almonds (8-10)
WEDNESDAY	Dakos (Bruchetta) Herbal tea Whole orange	Beetroot and runner bean salad with walnuts and feta. Slice grain bread.	Vegetable bake. Greek salad. Mineral water	Dried figs (2-3) Walnuts (30g) Low fat Greek yoghurt with berries
THURSDAY	Porridge (cooked rolled oats with skim milk) topped with fresh blueberries. Herbal tea	Cannellini bean soup. Greek salad Slice grain bread.	Rabbit stew with red wine (can use chicken if prefer) Mixed potato salad Glass red wine	Low fat Greek yoghurt with honey and walnuts. Slice revani cake (or other) 1 Apricot
FRIDAY	Slice grain bread with poached egg and sliced avocado. Sprinkled with lemon juice and pepper.	Roasted vegetable open sandwich. Plain mineral water	Baked risoni with lamb. Lettuce, cucumber, spring onion salad. Plain mineral water.	Slice walnut cake. Low fat Greek yoghurt with berries. Slice rock melon.
SATURDAY	Poached eggs in stewed tomatoes. Slice grain bread. Whole orange	Baked sardines on toasted grain bread. Greek coleslaw salad. Plain mineral water.	Stuffed tomatoes with rice. Black eye bean salad. Tzatziki dip Glass white wine.	Baklava (sm. serve). Greek yoghurt with honey. Slice watermelon
8000kj	78 g Protein (16% Energy)	180 g Carbs (38% Energy)	92 g Fat (42% Energy)	6 g Alc (2.2% Energy)

Thank you

latrobe.edu.au

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Evidence: Extra Virgin Olive Oil and CVD markers (1)

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PubMed

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See 1 citation found by title matching your search:

Crit Rev Food Sci Nutr. 2018 Apr 30:1-138. doi: 10.1080/10408398.2018.1470491. [Epub ahead of print]

The effect of high-polyphenol extra virgin olive oil on cardiovascular risk factors: a systematic review and meta-analysis.

George ES[1,2,3], Marshall S[4], Mayr HL[1], Trakman GL[1], Tatucu-Babet OA[1], Lassemillante AM[5], Bramley A[1], Reddy AJ[1], Forsyth A[1], Tierney AC[1,6], Thomas CJ[7], Itsiopoulos C[1], Marx W[1,8].

Author information

Abstract

The polyphenol fraction of extra-virgin olive oil may be partly responsible for its cardioprotective effects. The aim of this systematic review and meta-analysis was to evaluate the effect of high versus low polyphenol olive oil on cardiovascular disease (CVD) risk factors in clinical trials. In accordance with PRISMA guidelines, CINAHL, PubMed, Embase and Cochrane databases were systematically searched for relevant studies. Randomized controlled trials that investigated markers of CVD risk (e.g. outcomes related to cholesterol, inflammation, oxidative stress) were included. Risk of bias was assessed using the Jadad scale. A meta-analysis was conducted using clinical trial data with available CVD risk outcomes. Twenty-six studies were included. Compared to low polyphenol olive oil, high polyphenol olive oil significantly improved measures of malondialdehyde (MD: -0.07μmol/L [95%CI: -0.12, -0.02μmol/L]; I^2: 88%; p = 0.004), oxidized LDL (SMD: -0.44 [95%CI: -0.78, -0.10μmol/L]; I^2: 41%; P = 0.01), total cholesterol (MD 4.5mg/dL [95%CI: -6.54, -2.39mg/dL]; p<0.0001) and HDL cholesterol (MD 2.37mg/dL [95%CI: 0.41, 5.04mg/dL]; p = 0.02). Subgroup analyses and individual studies reported additional improvements in inflammatory markers and blood pressure. Most studies were rated as having low-to-moderate risk of bias. High polyphenol oils confer some CVD-risk reduction benefits; however, further studies with longer duration and in non-Mediterranean populations are required.

KEYWORDS: Cardiovascular; mediterranean diet; olive oil; oxidative stress; polyphenol; review