Of all the Gifts of Heaven...

Dr Simon Poole – Californian Olive Oil Council Conference, 2021

“Of all the gifts of Heaven to man, the olive is next to the most precious, if it be not the most precious”

Thomas Jefferson

Why Are We Here?

Extra Virgin Olive Oil – Stories to Tell of the Original Superfood and Being Part of the Journey

An Exciting New Chapter

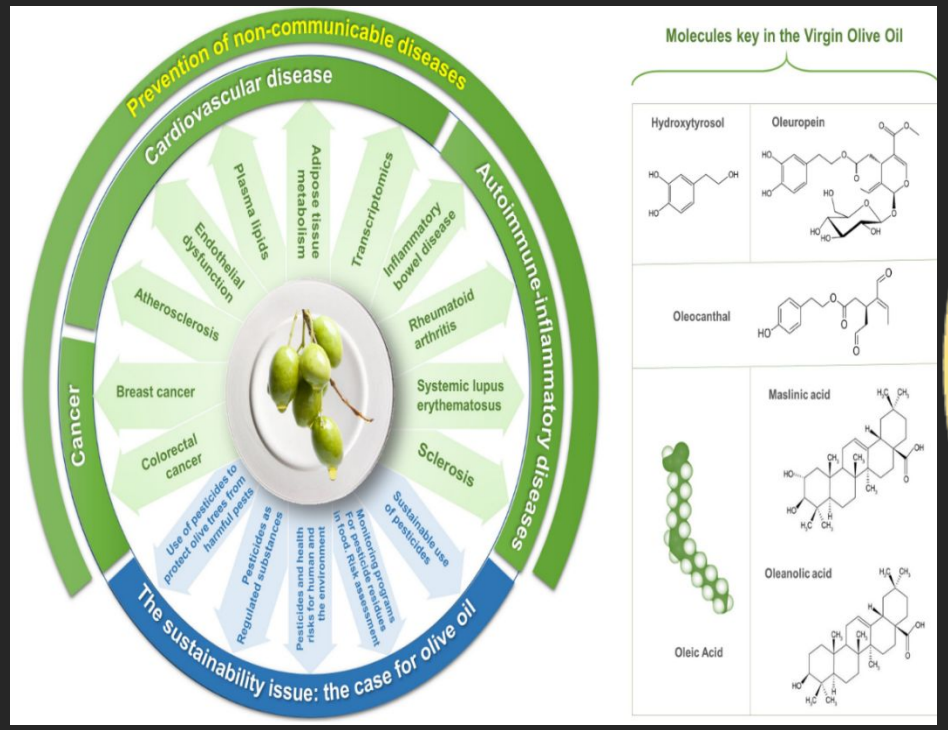
The Mediterranean Diet

Best Diet Overall
Best Plant Based Diet
Best Heart Healthy Diet

BEST DIETS
U.S.News & WORLD REPORT
RANKINGS

Best Diabetes Diet
Best Healthy Eating Diet
Easiest Diet to Follow

Ranked #1



CALIFORNIA OLIVE OIL COUNCIL
COOC
CERTIFIED EXTRA VIRGIN

What Have We Learned From the Pandemic?

Metabolism Clinical and Experimental 114 (2021) 154407

Contents lists available at ScienceDirect

Metabolism Clinical and Experimental

journal homepage: www.metabolismjournal.com

Editorials

Mediterranean diet as a nutritional approach for COVID-19

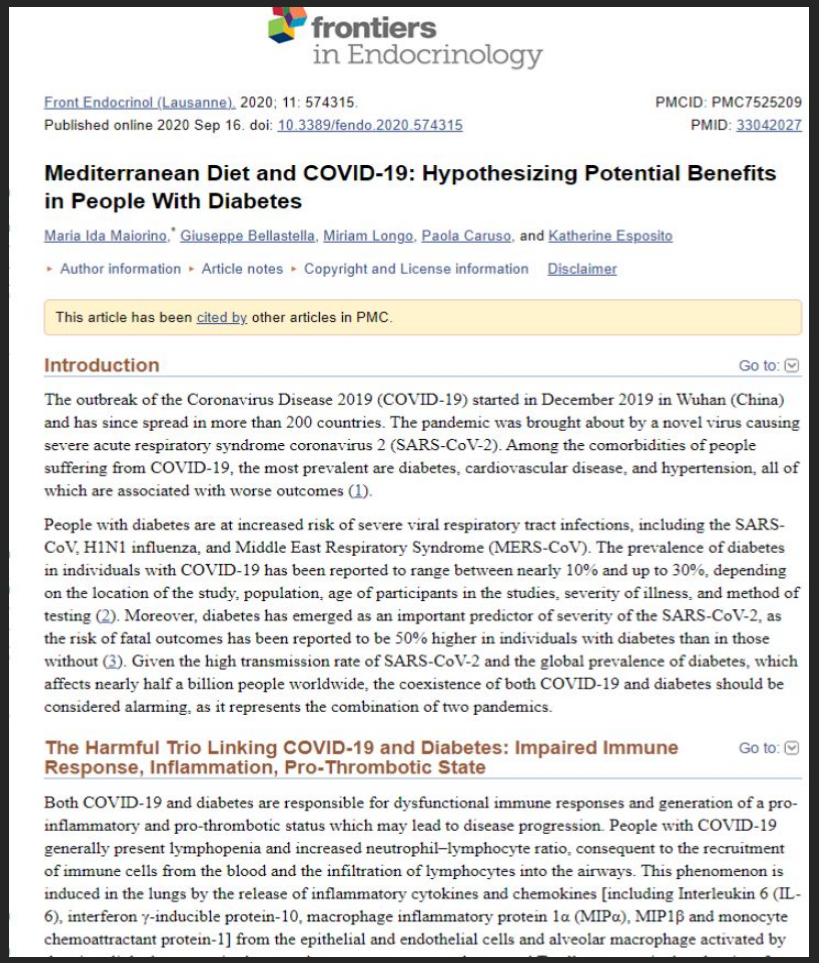
Keywords:
COVID-19
Coronavirus disease 2019
SARS-CoV-2
Severe acute respiratory syndrome coronavirus 2
Mediterranean diet
Nutrition
Obesity
Anti-inflammatory
Inflammation
Antioxidant

The 2019 coronavirus (COVID-19) disease pandemic, caused by the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), is associated with various clinical, mental, and psychological complications, and has challenged healthcare and social systems at a national and international level [1–3].

We and others have shown that obesity, central fat distribution, and adiposity-associated chronic diseases, e.g., diabetes mellitus and cardiometabolic disorders may lead to poor COVID-19 outcomes [4–6]. Common underlying pathophysiological features such as chronic inflammation, immune dysregulation, oxidative stress, increased cytokine production, endothelial dysfunction, increased number of angiotensin-converting enzyme 2 (ACE2)-expressing adipocytes and the possible role of adipose tissue as a viral reservoir, are among the factors that predispose to worse COVID-19 outcomes [4,6–8].

The Mediterranean diet, one of the healthiest dietary patterns worldwide, reputed for its demonstrated preventive effect of cardiovascular diseases and type-2 diabetes in several trials [11–13] is characterized by the inclusion of mainly plant-derived nutritional components, namely fruits, vegetables, legumes, nuts, and olive oil, all of which are significant sources of bioactive polyphenols. Polyphenols, particularly flavonoids and their metabolites, demonstrate pleiotropic health-promoting effects, especially in cardiovascular and metabolic disorders, due to their antioxidant, anti-inflammatory, and anti-thrombotic properties [14,15]. These properties become even more critical in view of the exaggerated inflammatory and pro-thrombotic milieu associated with COVID-19 severe illness [16,17]. Polyphenols alleviate the immune response, increase antioxidant defenses, improve vascular reactivity, and decrease tissue inflammation and cell infiltration, thus promoting metabolic and cardiovascular health; these beneficial effects appear to be exerted through preventing the activation of the Nuclear factor-κB (NF-κB) signaling pathway and nicotinamide adenine dinucleotide phosphate (NAPDH) oxidase and by reducing the levels of pro-inflammatory cytokines such as interleukin-6 and tumor necrosis factor-alpha [18,19]. Ellagic acid, a particularly bioactive phenolic compound found in some fruits and nuts, also acts via interaction with microbiota and epigenetic regulation [18].

Consumption of nuts and dried fruits such as raisins, which are integral part of the Mediterranean diet, promotes cardiometabolic health



frontiers in Endocrinology

Front Endocrinol (Lausanne). 2020; 11: 574315.
Published online 2020 Sep 16. doi: 10.3389/fendo.2020.574315

PMCID: PMC7525209
PMID: 33042027

Mediterranean Diet and COVID-19: Hypothesizing Potential Benefits in People With Diabetes

Maria Ida Maiorino,* Giuseppe Bellastella, Miriam Longo, Paola Caruso, and Katherine Esposito

Introduction

Go to:

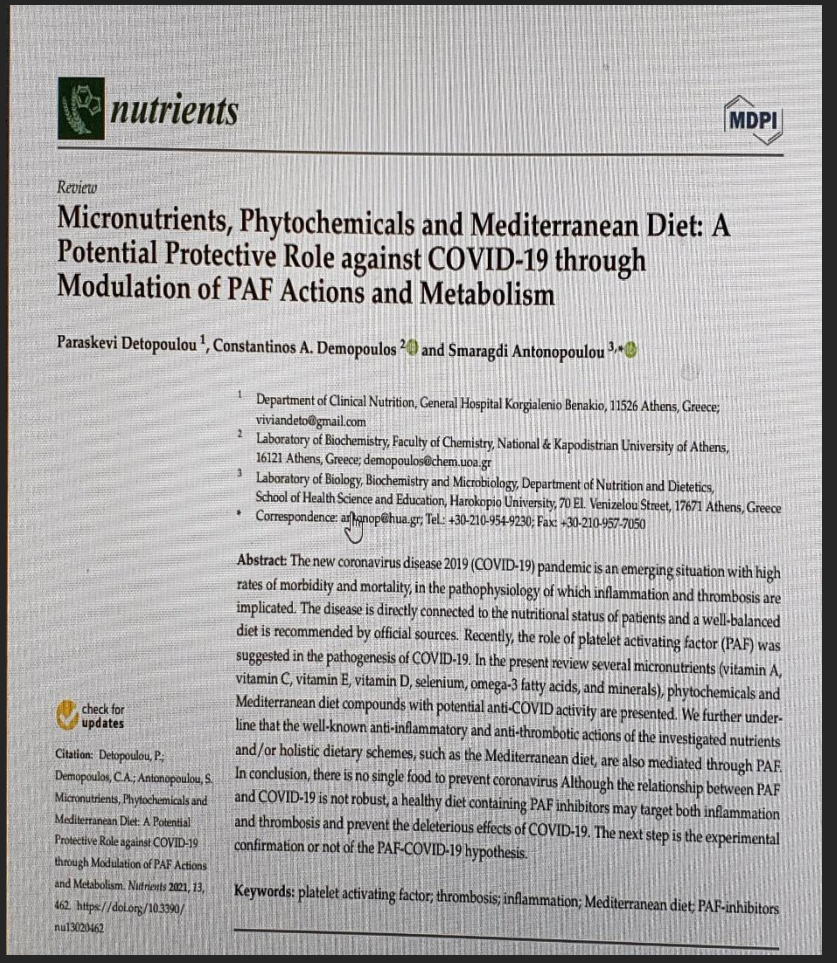
The outbreak of the Coronavirus Disease 2019 (COVID-19) started in December 2019 in Wuhan (China) and has since spread in more than 200 countries. The pandemic was brought about by a novel virus causing severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Among the comorbidities of people suffering from COVID-19, the most prevalent are diabetes, cardiovascular disease, and hypertension, all of which are associated with worse outcomes (1).

People with diabetes are at increased risk of severe viral respiratory tract infections, including the SARS-CoV, H1N1 influenza, and Middle East Respiratory Syndrome (MERS-CoV). The prevalence of diabetes in individuals with COVID-19 has been reported to range between nearly 10% and up to 30%, depending on the location of the study, population, age of participants in the studies, severity of illness, and method of testing (2). Moreover, diabetes has emerged as an important predictor of severity of the SARS-CoV-2, as the risk of fatal outcomes has been reported to be 50% higher in individuals with diabetes than in those without (3). Given the high transmission rate of SARS-CoV-2 and the global prevalence of diabetes, which affects nearly half a billion people worldwide, the coexistence of both COVID-19 and diabetes should be considered alarming, as it represents the combination of two pandemics.

The Harmful Trio Linking COVID-19 and Diabetes: Impaired Immune Response, Inflammation, Pro-Thrombotic State

Go to:

Both COVID-19 and diabetes are responsible for dysfunctional immune responses and generation of a pro-inflammatory and pro-thrombotic status which may lead to disease progression. People with COVID-19 generally present lymphopenia and increased neutrophil–lymphocyte ratio, consequent to the recruitment of immune cells from the blood and the infiltration of lymphocytes into the airways. This phenomenon is induced in the lungs by the release of inflammatory cytokines and chemokines [including Interleukin 6 (IL-6), interferon γ-inducible protein-10, macrophage inflammatory protein 1α (MIPα), MIP1β and monocyte chemoattractant protein-1] from the epithelial and endothelial cells and alveolar macrophage activated by



nutrients

MDPI

Review

Micronutrients, Phytochemicals and Mediterranean Diet: A Potential Protective Role against COVID-19 through Modulation of PAF Actions and Metabolism

Paraskevi Detopoulou [1], Constantinos A. Demopoulos [2] and Smaragdi Antonopoulou [3,*]

1 Department of Clinical Nutrition, General Hospital Korgialenio Benakio, 11526 Athens, Greece; viviandeto@gmail.com
2 Laboratory of Biochemistry, Faculty of Chemistry, National & Kapodistrian University of Athens, 16121 Athens, Greece; demopoulos@chem.uoa.gr
3 Laboratory of Biology, Biochemistry and Microbiology, Department of Nutrition and Dietetics, School of Health Science and Education, Harokopio University, 70 El. Venizelou Street, 17671 Athens, Greece
* Correspondence: arkanop@hua.gr; Tel.: +30-210-954-9230; Fax: +30-210-957-7050

Abstract: The new coronavirus disease 2019 (COVID-19) pandemic is an emerging situation with high rates of morbidity and mortality, in the pathophysiology of which inflammation and thrombosis are implicated. The disease is directly connected to the nutritional status of patients and a well-balanced diet is recommended by official sources. Recently, the role of platelet activating factor (PAF) was suggested in the pathogenesis of COVID-19. In the present review several micronutrients (vitamin A, vitamin C, vitamin E, vitamin D, selenium, omega-3 fatty acids, and minerals), phytochemicals and Mediterranean diet compounds with potential anti-COVID activity are presented. We further underline that the well-known anti-inflammatory and anti-thrombotic actions of the investigated nutrients and/or holistic dietary schemes, such as the Mediterranean diet, are also mediated through PAF. In conclusion, there is no single food to prevent coronavirus Although the relationship between PAF and COVID-19 is not robust, a healthy diet containing PAF inhibitors may target both inflammation and thrombosis and prevent the deleterious effects of COVID-19. The next step is the experimental confirmation or not of the PAF-COVID-19 hypothesis.

Keywords: platelet activating factor; thrombosis; inflammation; Mediterranean diet; PAF-inhibitors

check for updates

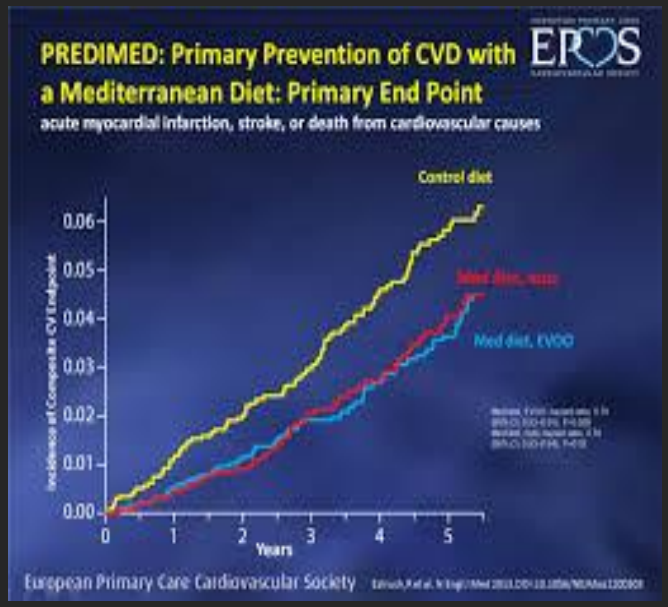
Citation: Detopoulou, P., Demopoulos, C.A.; Antonopoulou, S. Micronutrients, Phytochemicals and Mediterranean Diet: A Potential Protective Role against COVID-19 through Modulation of PAF Actions and Metabolism. *Nutrients* 2021, 13, 462. https://doi.org/10.3390/nu13020462

Are You Holding Onto Your Seats?

Scientific Landmarks for the Mediterranean Diet

- Keys, Ancel (1980). Seven Countries; A multivariate analysis of death and coronary heart disease.
- 1999 Lyon Heart Study
- 2004 HALE project publication; 10 year mortality in elderly men and women
- Nutrition Review February 2006, analysis of 43 intervention studies - Scientific Evidence for the Mediterranean Diet
- Large meta analysis; Adherence to a Mediterranean Diet and Health Status; 2008 Sofi et al BMJ
- The Effect of Mediterranean Diet on metabolic syndrome and its components; a meta-analysis of 50 studies and 534,906 individuals. Am Coll Cardiology 2011 Kastorini
- Predimed; EPIC

Now Recognised as the Gold Standard Diet



The Mediterranean Diet – A Recipe for Wellness

- Reduced risk of Cardiovascular Disease
- Reduced risk of Stroke
- Reduced risk of Obesity
- Reduced risk of Diabetes
- Reduced risk of Cancers
- Reduced risk of Alzheimer’s Disease; Parkinson's Disease
- Reduced risk of Inflammatory Conditions –Arthritis/ Asthma. Reduced Markers of Inflammation
- Reduced risk of Early Mortality
- Improved Wellbeing, Reduced Depression
- Improved Markers of Aging

Mediterranean Diet Pyramid

A contemporary approach to delicious, healthy eating

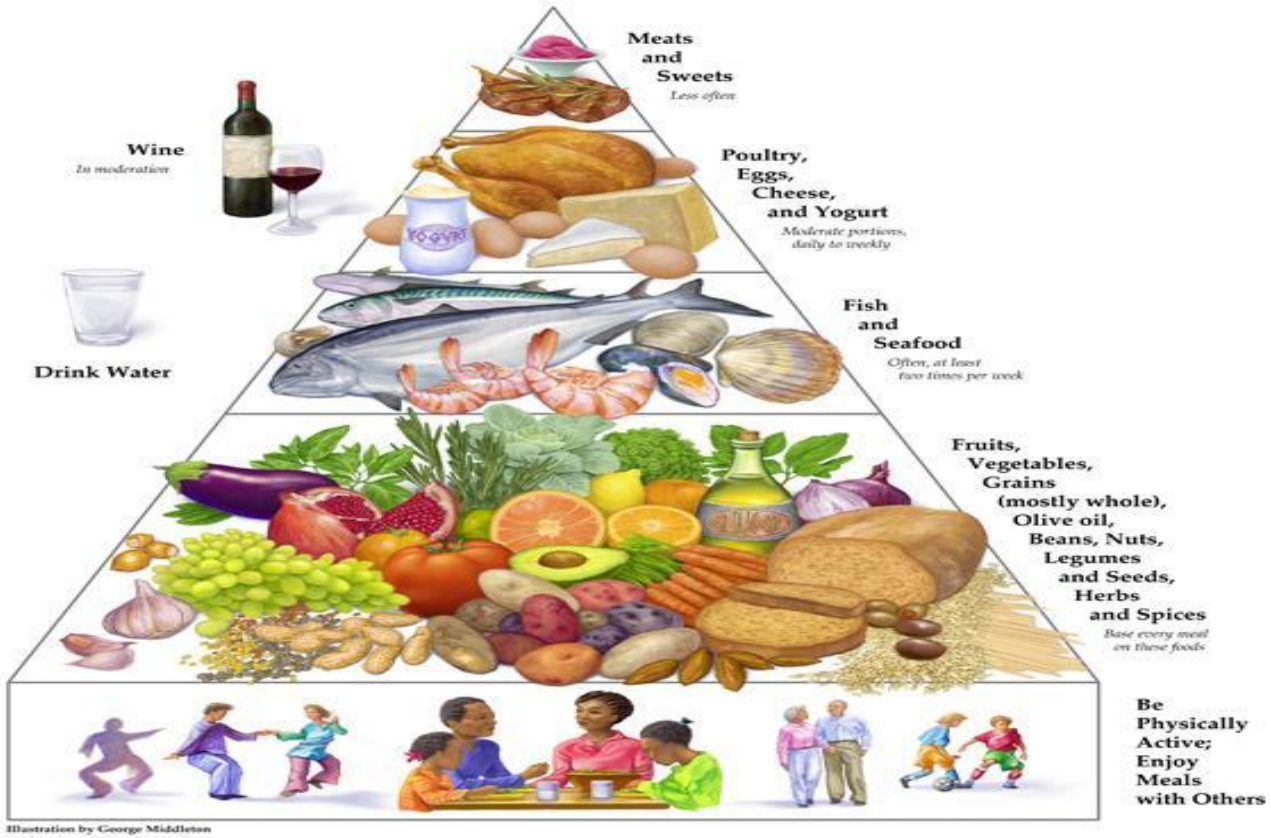
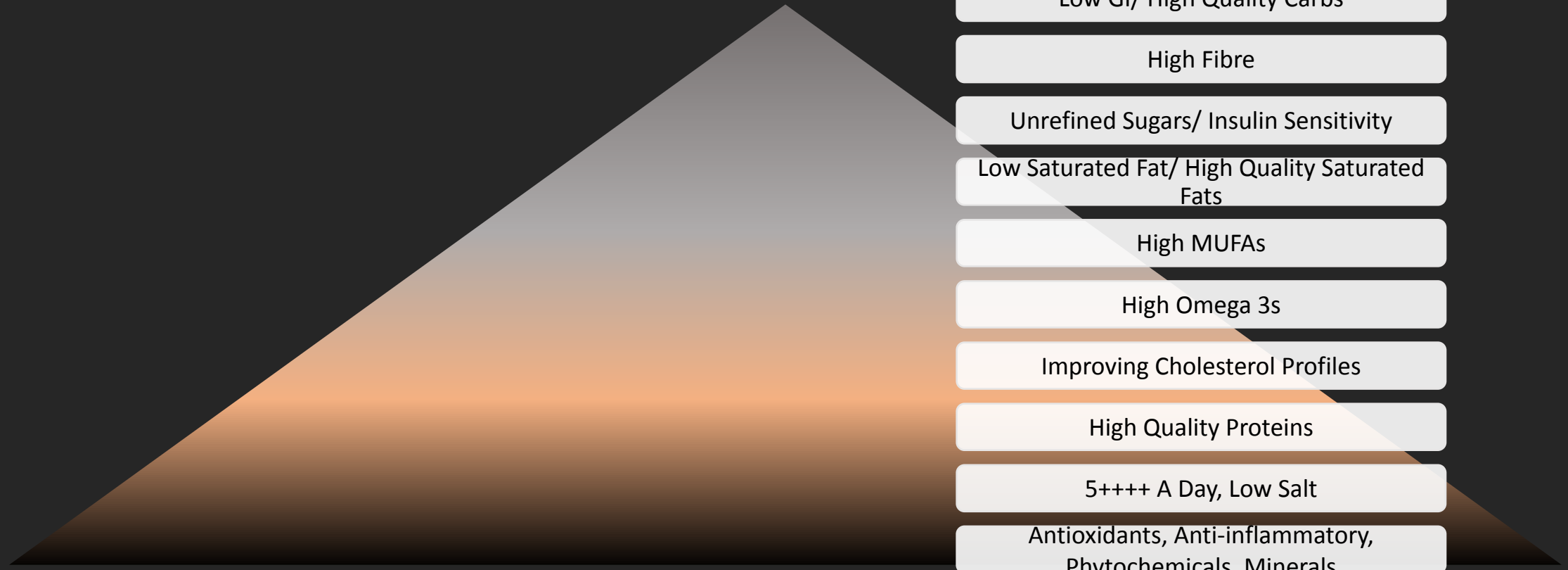


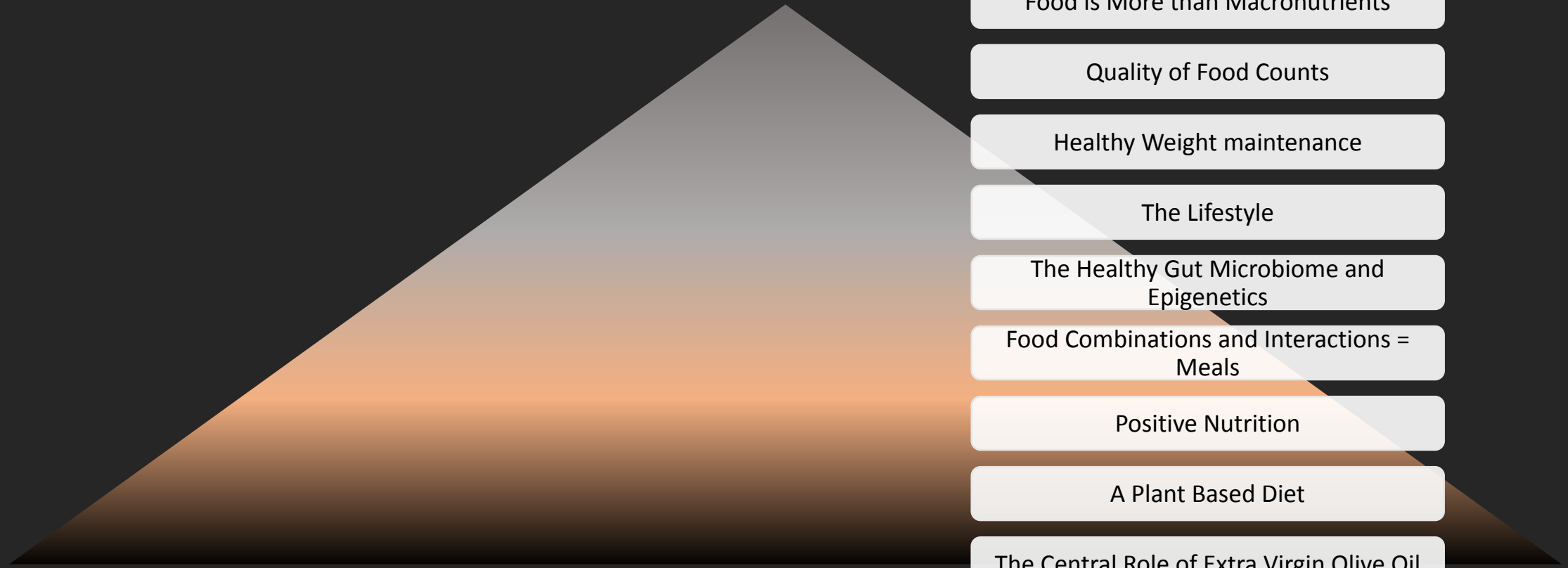
Illustration by George Middleton

Traditional Diet Meets Modern Understanding , Rising Above the Macronutrient “Food Fights”



- Low GI/ High Quality Carbs
- High Fibre
- Unrefined Sugars/ Insulin Sensitivity
- Low Saturated Fat/ High Quality Saturated Fats
- High MUFAs
- High Omega 3s
- Improving Cholesterol Profiles
- High Quality Proteins
- 5++++ A Day, Low Salt
- Antioxidants, Anti-inflammatory, Phytochemicals, Minerals

Understanding How The Med Diet Works - Real Food, Beautifully Combined, Healthily Absorbed



- Food is More than Macronutrients
- Quality of Food Counts
- Healthy Weight maintenance
- The Lifestyle
- The Healthy Gut Microbiome and Epigenetics
- Food Combinations and Interactions = Meals
- Positive Nutrition
- A Plant Based Diet
- The Central Role of Extra Virgin Olive Oil

EVOO is the Common Denominator in the Mediterranean Diets

EVOO Effects are Inseparable, Considerable and Individually Measurable

	Recommendation*	Score
Fruit	1–2 servings/main meal**	3
Vegetables	≥ 2 servings/main meal**	3
Cereals[a]	1–2 servings/main meal**	3
Potatoes	≤ 3 servings/week	1
Olive Oil[b]	1 serving/main meal**	3
Nuts	1–2 servings/day	2
Dairy products[c]	2 servings/day	2
Legumes	≥ 2 servings/week	1
Eggs	2–4 servings/week	1
Fish	≥ 2 servings/week	1
White meat[d]	2 servings/week	1
Red meat[e]	< 2 servings/week	1
Sweets[f]	≤ 2 servings/week	1
Fermented beverages[g]	1–2 glass/day	1
Total score		**24**

* According with the new Mediterranean Diet Pyramid [16].

** Main meals: breakfast, lunch and dinner.

[a] Bread, breakfast cereals, rice and pasta.

[b] Olive oil used on salads or bread or for frying

[c] Milk, yoghurt, cheese, ice-cream

[d] Poultry

[e] Pork, beef, or lamb

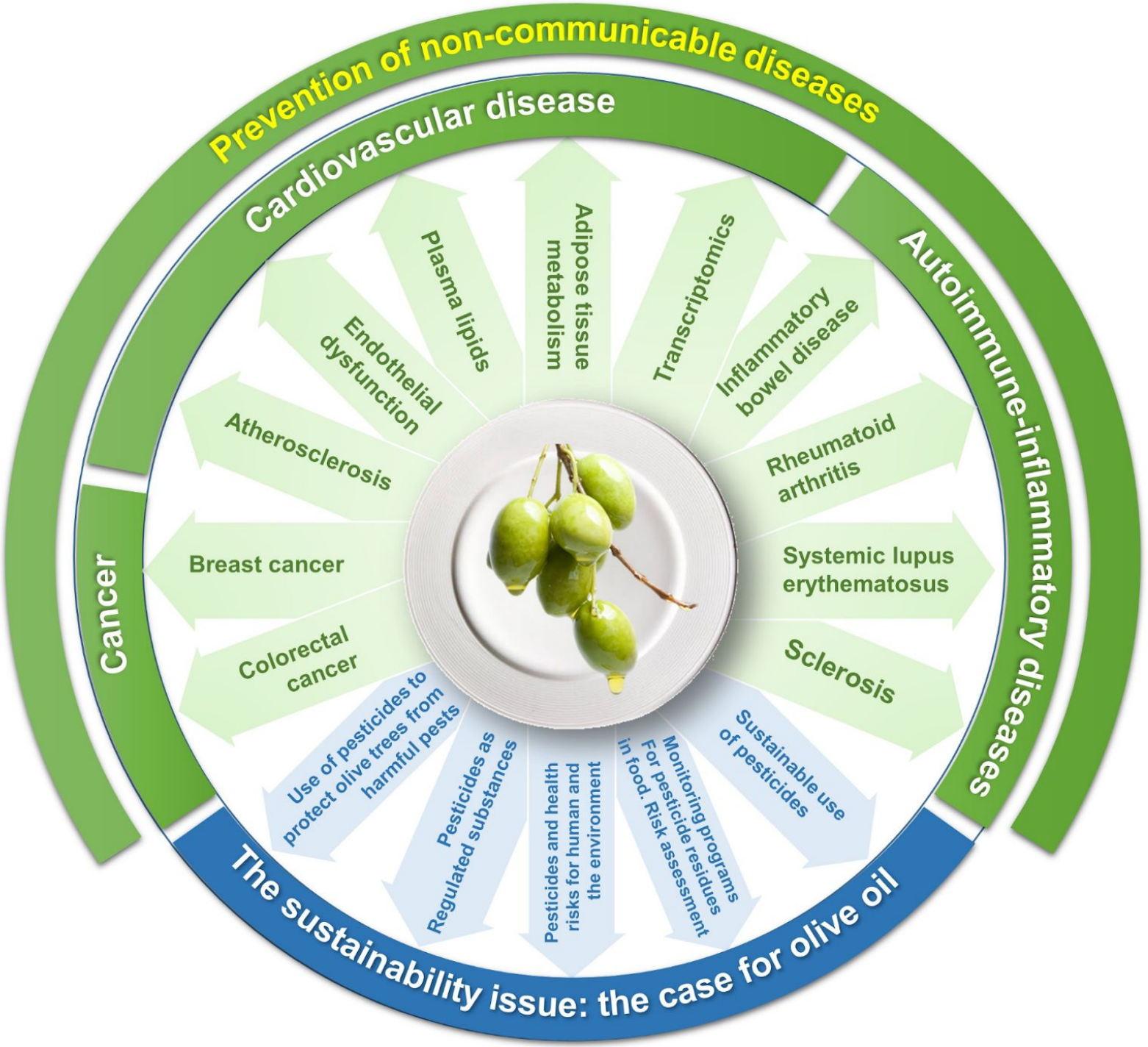
[f] Sugar, candies, pastries, sweetened fruit juices, and soft drinks

[g]Wine and beer.

doi:10.1371/journal.pone.0128594.t001

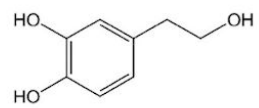
The Science Specific to Extra Virgin Olive Oil – Landmark Studies

- 2011 Bordeaux Study – 78% difference in risk of stroke between low and high EVOO consumers
- 2012 EPIC Study – Risk of heart disease halved by regular 20mls of EVOO, and reduced all cause mortality by 26%
- 2013 Predimed Study – Heart Disease, Stroke and Mortality reduced by a third in EVOO supplemented Med Diet. Diabetes 50%, Cognition, Breast Cancer
- Extra Virgin Olive Oil – emerging science of effects on blood pressure, cancers, platelet aggregation (blood clotting), markers of inflammation

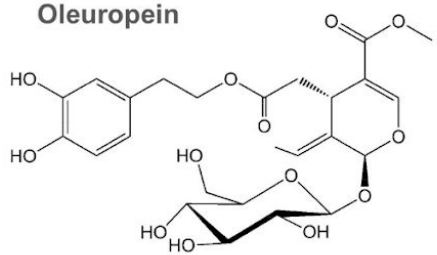


Molecules key in the Virgin Olive Oil

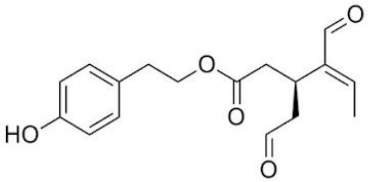
Hydroxytyrosol

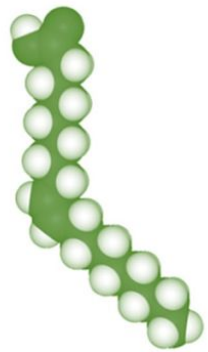


Oleuropein



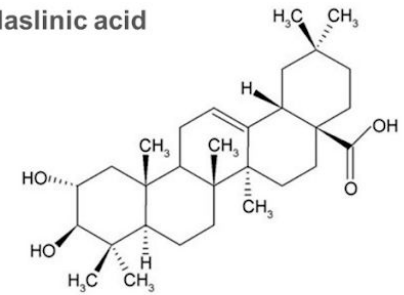
Oleocanthal



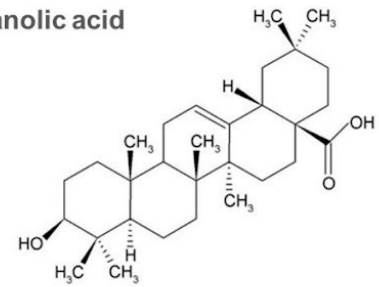


Oleic Acid

Maslinic acid



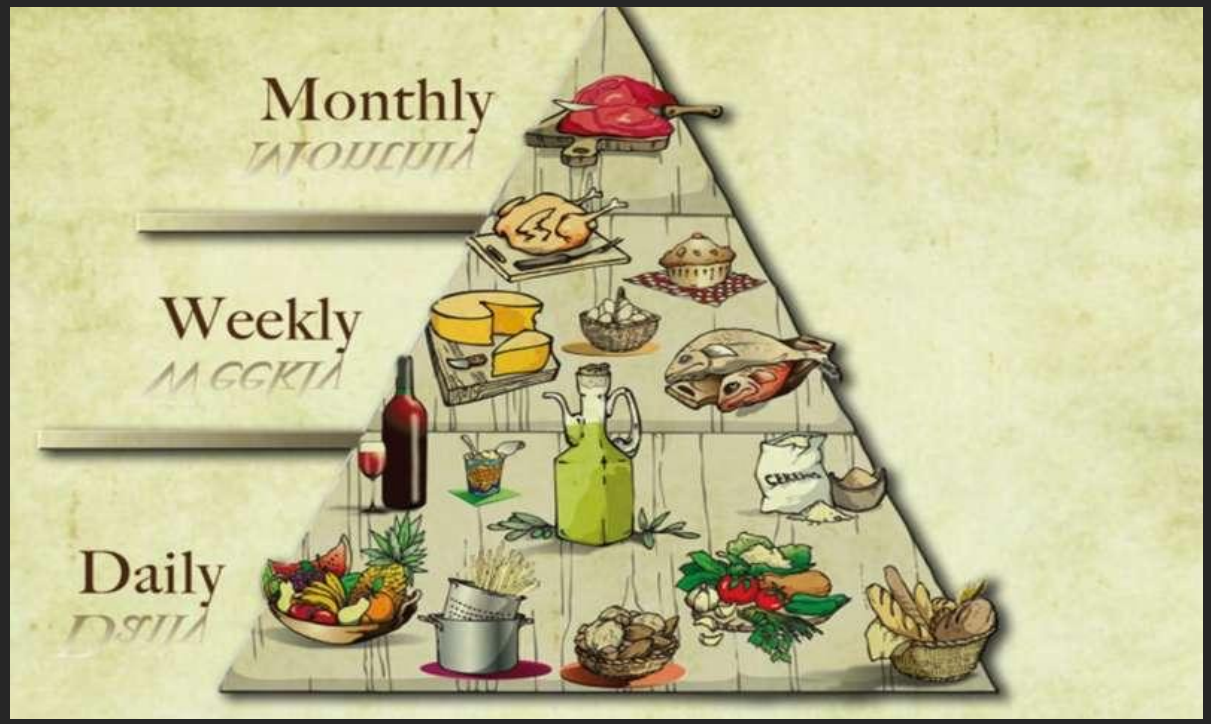
Oleanolic acid



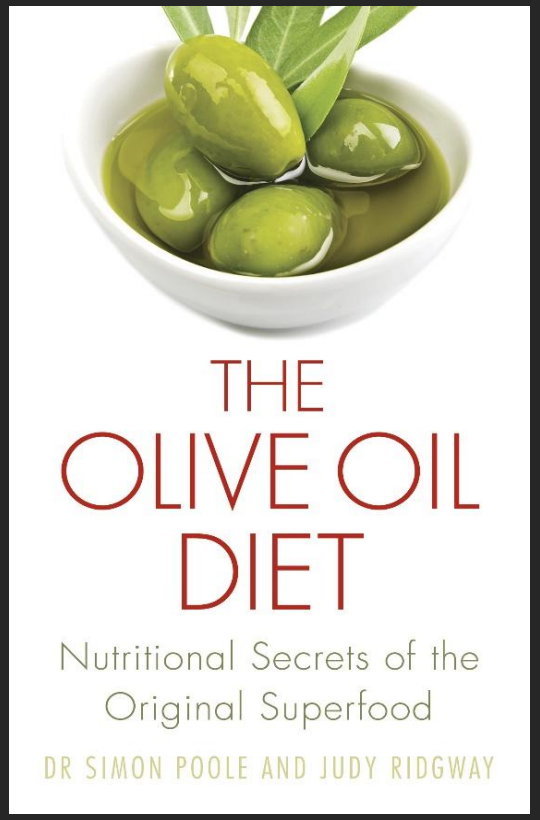
The Secret Stories and Science of Extra Virgin Olive Oil

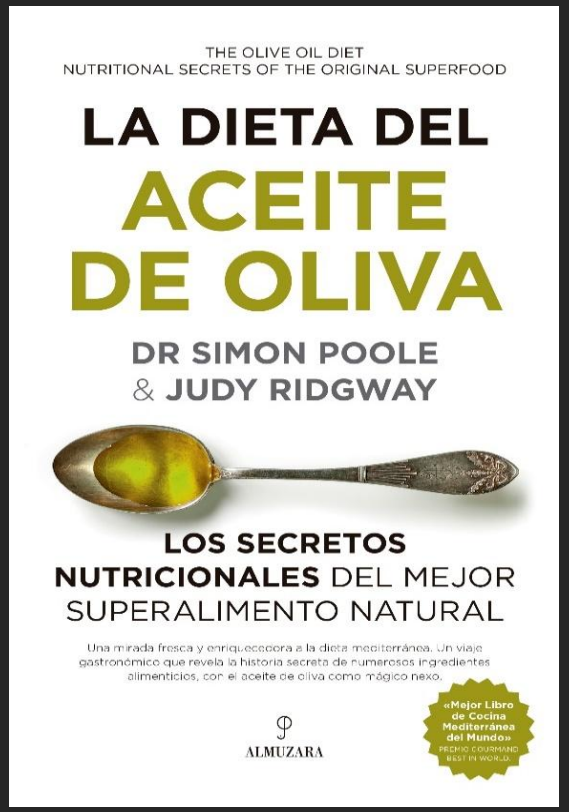
- Extra Virgin Olive Oil as an Antioxidant and Anti-inflammatory
- Increases Insulin Sensitivity
- Decreases the Glycaemic Load of Meals
- Increases Satiety
- Plant Nitrates + EVOO Fats Combined to Lower Blood Pressure
- Antioxidants Protect EVOO at Temperature
- Protecting Meat from Carcinogen Formation
- Protects the Heat Sensitive Omega3s in Fish
- The Olive Oil Antioxidant Cocktail – Increased Bioavailability Fat Soluble Antioxidants in Co-Ingredients

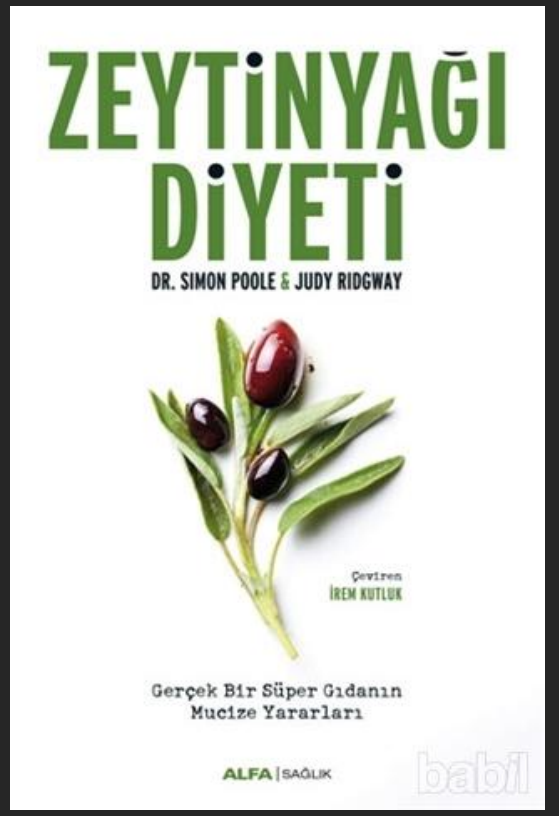
Extra Virgin Olive Oil – the Soul of the Mediterranean Diet



The Olive Oil Diet







Building The Med Diet based on Extra Virgin Olive Oil
The Ubiquitous Liquid Gold

Chemistry of Olive Oil – A Continuing Journey of Discovery

The Unique Chemistry of *EXTRA VIRGIN* Olive Oil

A Monounsaturated Fat

- Helps Satiety
- Stable to Heat
- Improves Cholesterol Profile
- Absorbs Fat Soluble Vitamins

The Unique Antioxidant and Anti-inflammatory Polyphenol Compounds of EVOO (NOT present in other oils)

- Reducing Harmful Oxidation and Inflammation
- Reducing Risk of Heart Disease
- Reducing Risk of Cancers

Some Olive Oil Myths

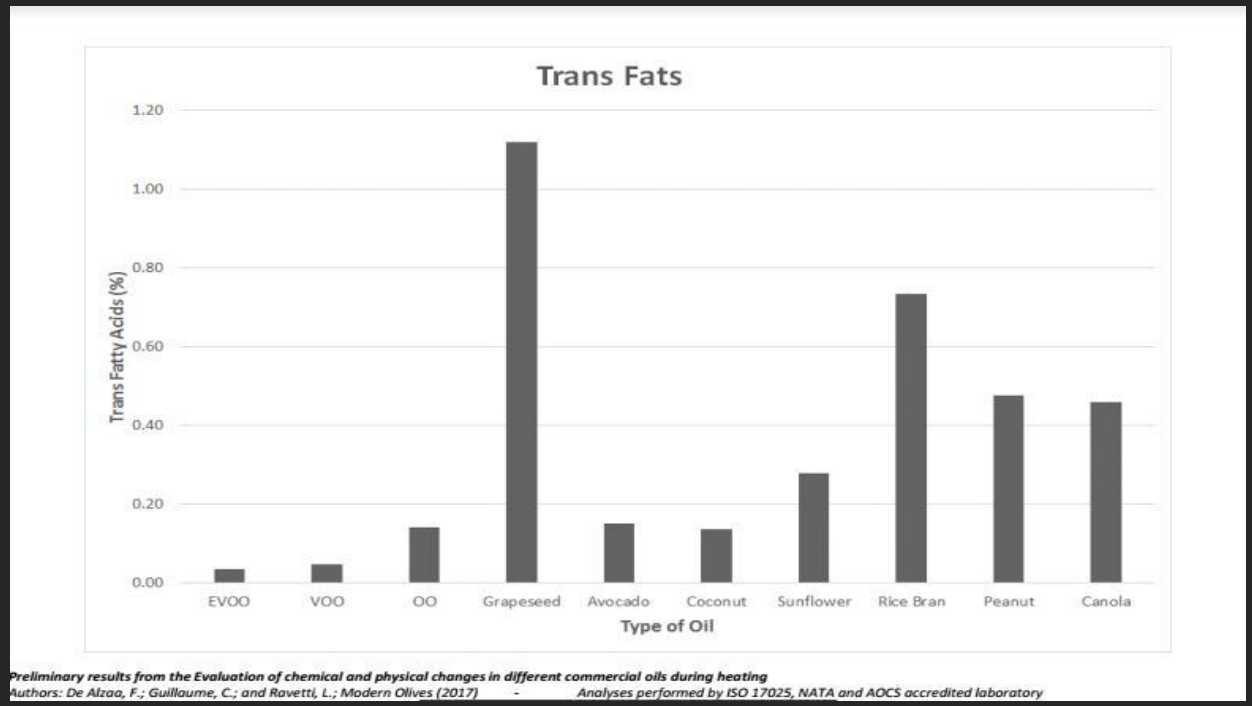
- “The Mediterranean Diet is just about eating more fruit and vegetables – I can use any oil”
- “It’s not safe to cook with extra virgin olive oil”
- “Canola/rapeseed oil is better for me”
- “Extra virgin olive oil is just another good fat.”
- “Olive oil is just as good as extra virgin oil”
- “It’s a waste to use “good” oil to cook”
- “Extra virgin olive oil is expensive”
- “I should keep extra virgin olive oil for special occasions”
- “A 500ml bottle of extra virgin olive oil is a monthly purchase”
- “Most extra virgin olive oil is fake”
- “All extra virgin olive oils are the same”
- “It contains too many calories and makes me fat”

It is Safe and Desirable to Cook with Olive Oil

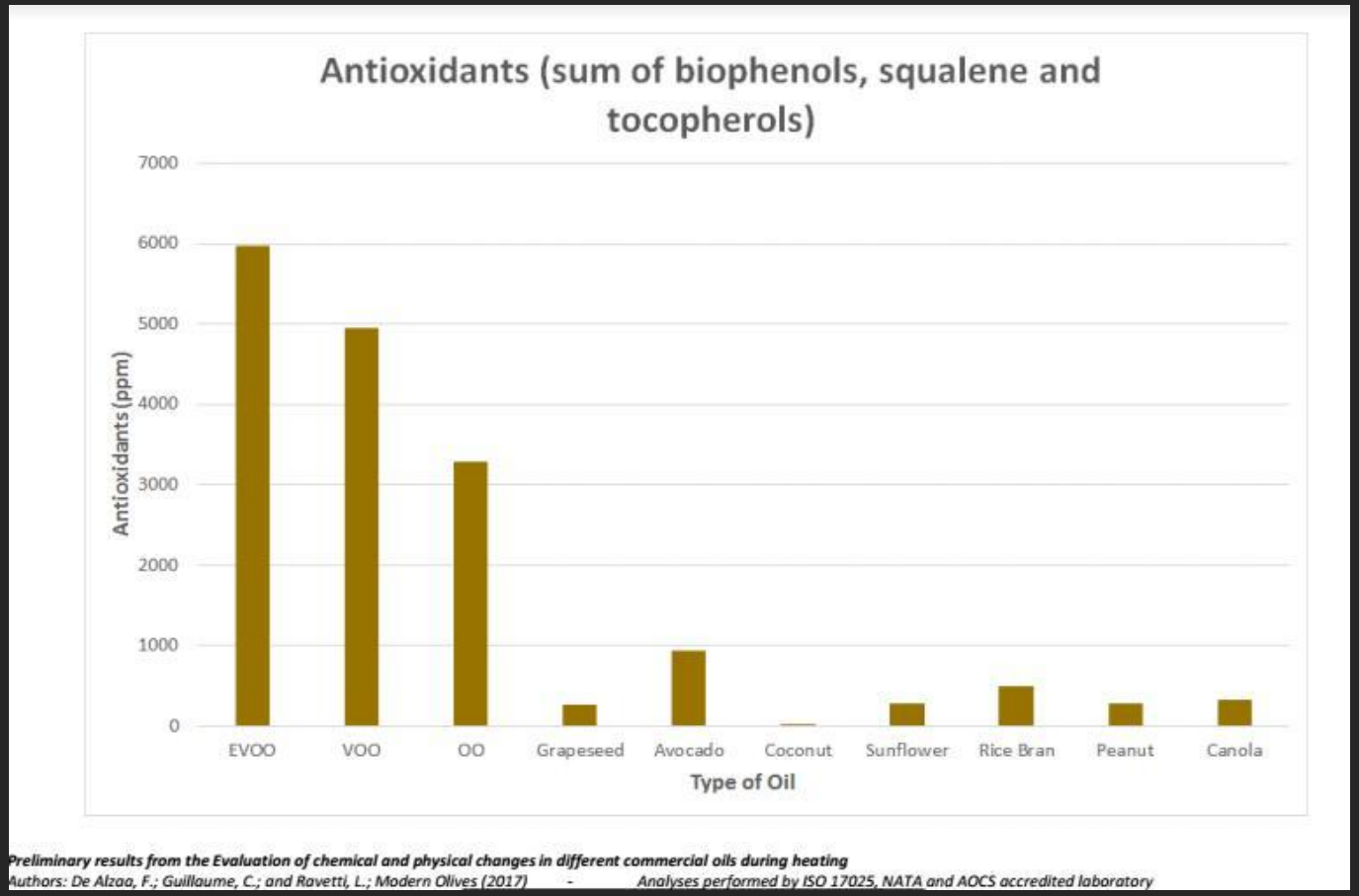
Table 3 Association between fried food consumption and incidence of definite coronary heart disease and all cause mortality during 11 years of follow-up in Spanish cohort of European Prospective Investigation into Cancer and Nutrition

Variables	Quarters of fried food consumption				P for trend	For 100 g increase of fried food
	1 (lowest)	2	3	4 (highest)		
Coronary heart disease:						
Total No	10 188	10 190	10 190	10 189		
Person years	109 578	110 394	110 943	111 762		
No of events	154	163	150	139		
Model 1*: hazard ratios (95% CI)	1	1.05 (0.84 to 1.33)	0.97 (0.76 to 1.24)	0.94 (0.72 to 1.23)	0.52	0.95 (0.86 to 1.06)
Model 2†: hazard ratios (95% CI)	1	1.15 (0.91 to 1.46)	1.08 (0.84 to 1.39)	1.11 (0.84 to 1.46)	0.60	1.01 (0.91 to 1.12)
Model 3‡: hazard ratios (95% CI)	1	1.15 (0.91 to 1.45)	1.07 (0.83 to 1.38)	1.08 (0.82 to 1.43)	0.74	1.00 (0.90 to 1.11)
All cause mortality:						
Total No	10 188	10 190	10 190	10 189		
Person years	110 135	111 019	111 560	112 342		
No of deaths	328	276	273	258		

The Chemistry of Extra Virgin Olive Oil in the Kitchen

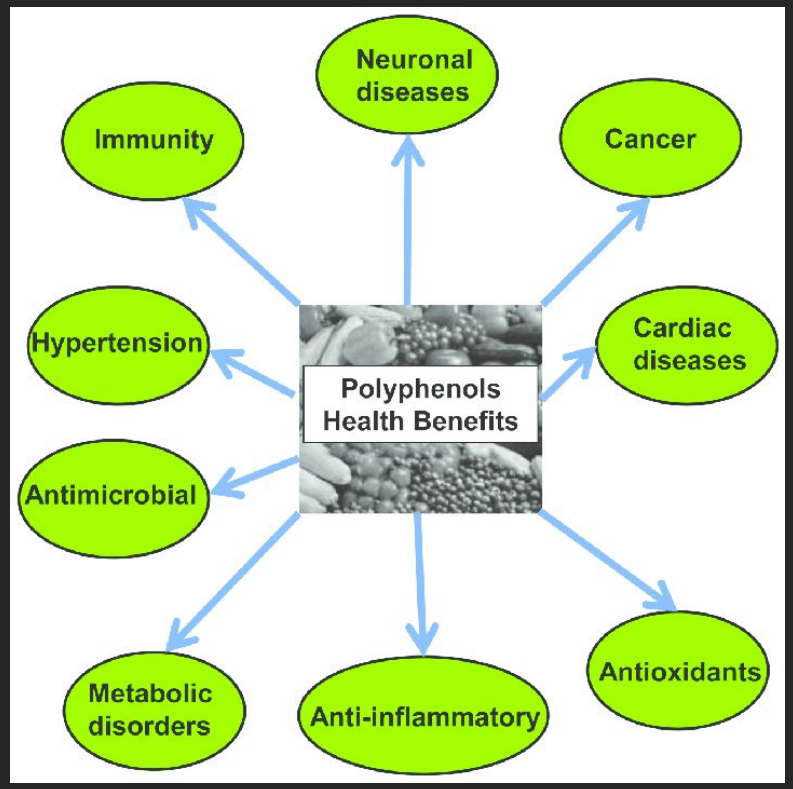


Heat, Oxidation and Residual Oxidative Capacity



An Extra Virgin Olive Oil for every Kitchen and Table
The Heart and Soul of the Mediterranean Diet

Polyphenols - Nature’s Natural Medicines; The Health Story of 2020s

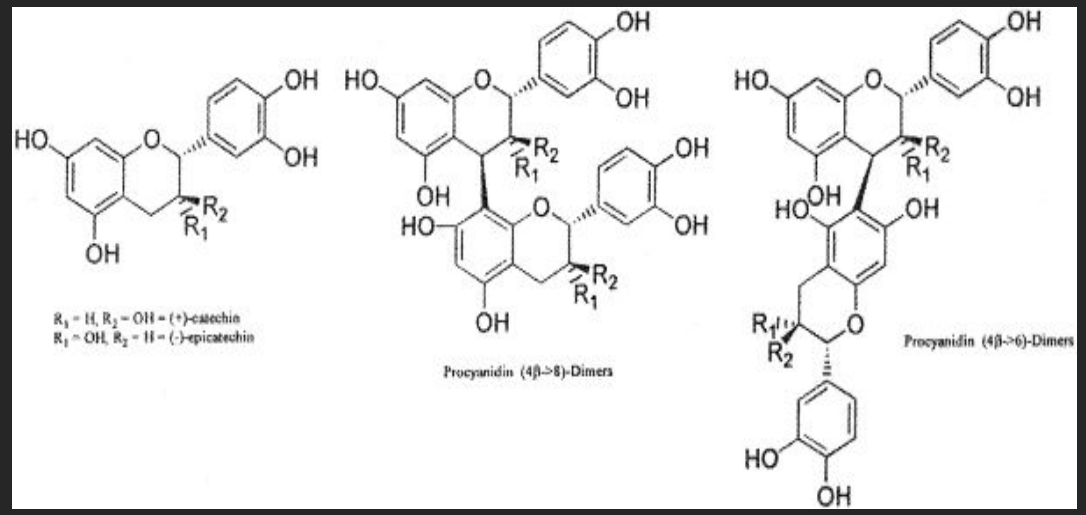


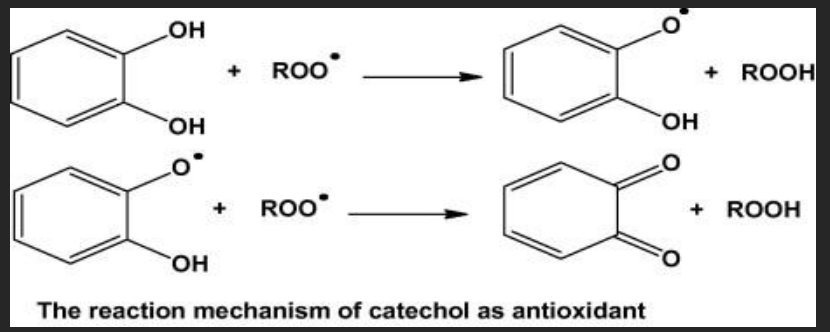
Polyphenols – the most interesting things no one has heard of..

- Polyphenols are a category of ***aromatic*** chemicals that naturally occur in plants. There are more than 500 unique polyphenols. Collectively, these chemicals are known as phytochemicals
- Probable effects through powerful antioxidant and anti-inflammatory activity

  "The majority of antioxidants including **polyphenols** scavenge free radicals. In this process, the antioxidant transfers hydrogen atom or electron to neutralize the free radical thereby preventing chain reactions such as lipid peroxidation "
- The theory of polyphenols for plant protection from oxidation, inflammation, microbial attack and destruction
- Polyphenols influencing taste
- Unique and abundant polyphenols in the fruit of the olive tree

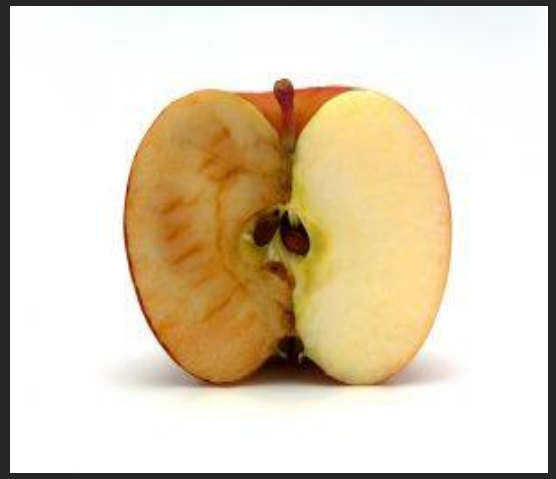
The Destructive Power of Oxygen Free Radicals and Healing Antioxidants

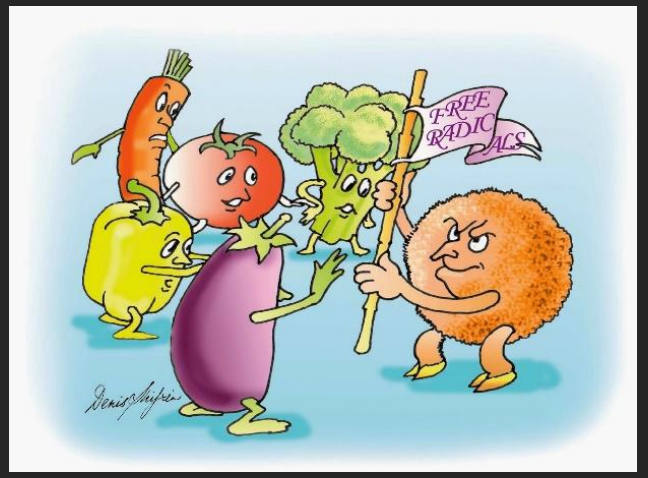


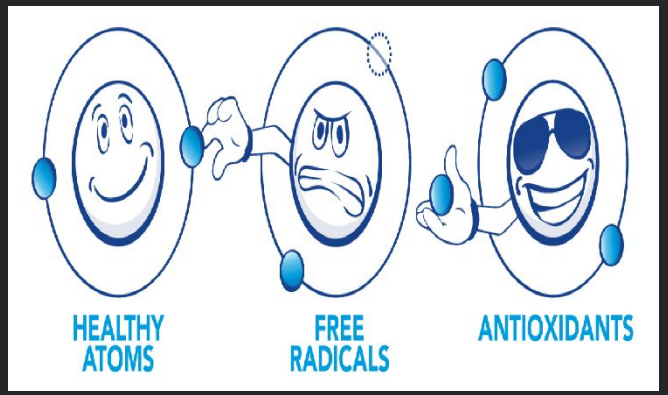


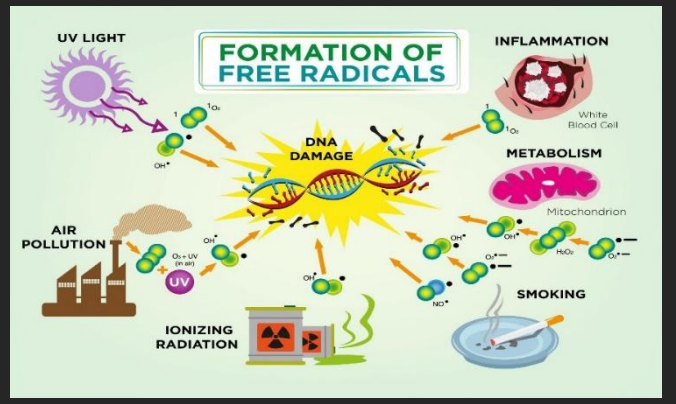
The reaction mechanism of catechol as antioxidant

Explaining The Power of Oxidation





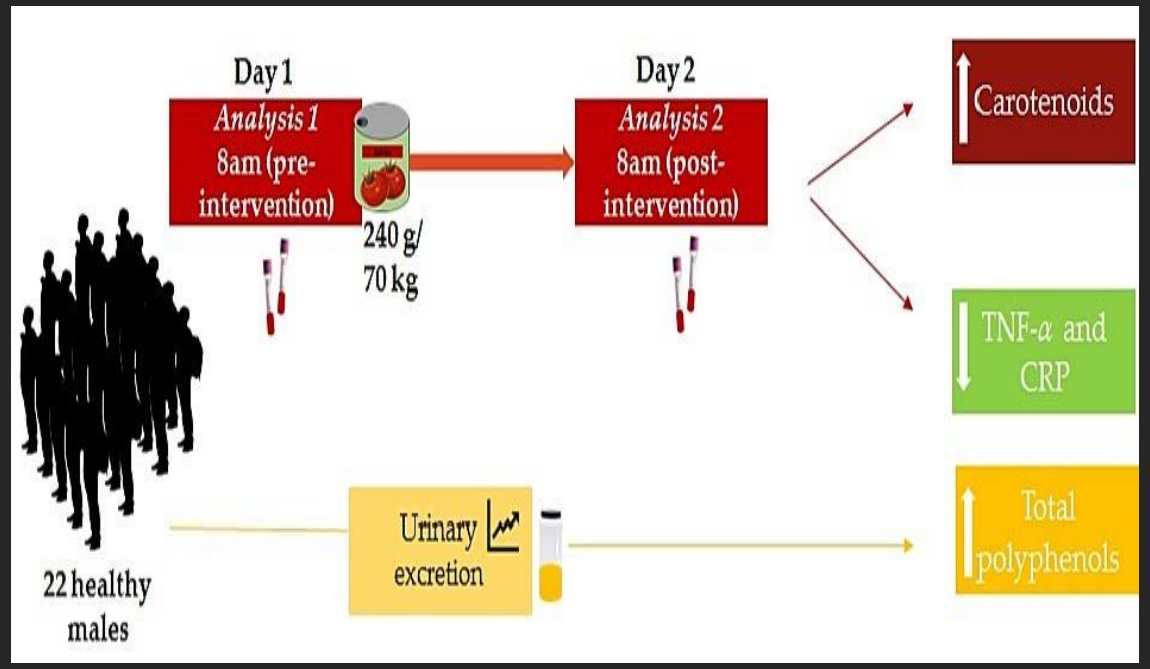


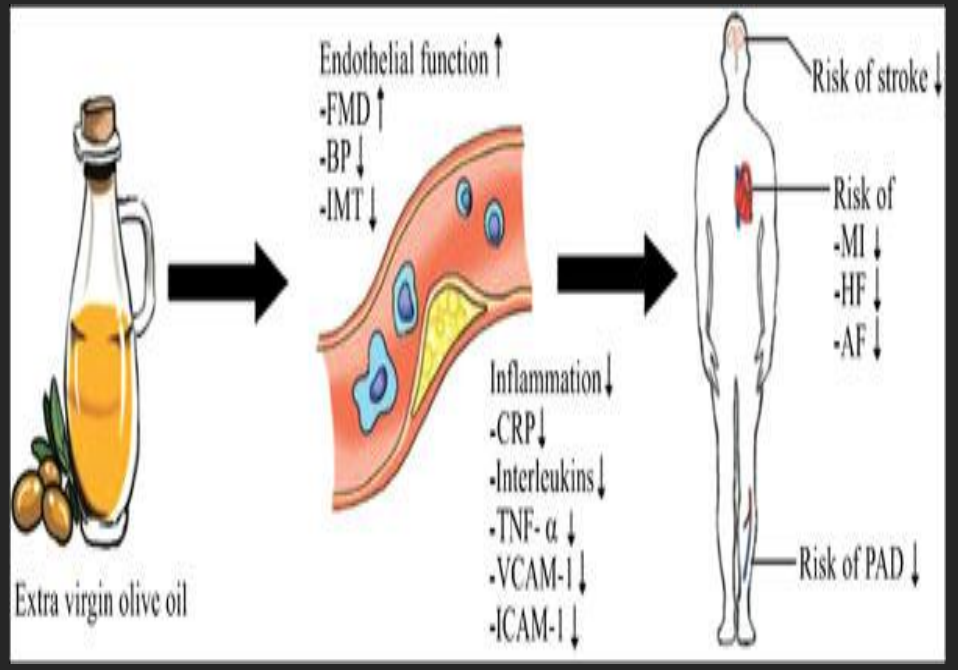


Chronic Disease, Oxidative Stress and Inflammation

- The Understanding of Chronic Inflammation
- Cardiovascular Disease Redefined
- Statins and Other Anti-inflammatories
- Inflammation, Oxidation and Cancer

Diet ,Inflammation and Chronic Disease





Extra Virgin Olive Oils Are Not All The Same – Quality Matters Achieving Perfection in Stress and Care – Producing and Preserving Antioxidants

Factors Affecting Health, Polyphenols and Taste Profiles of Extra Virgin Olive Oils

- Extra Virginity and Acidity
- Variety
- Processing
- Time of Harvest
- Irrigation/ Agricultural Factors/ Stress
- Altitude
- Organic Cultivation
- Storage
- Oxidative Processes Consume Antioxidant Polyphenols - Oxygen, Heat, Light

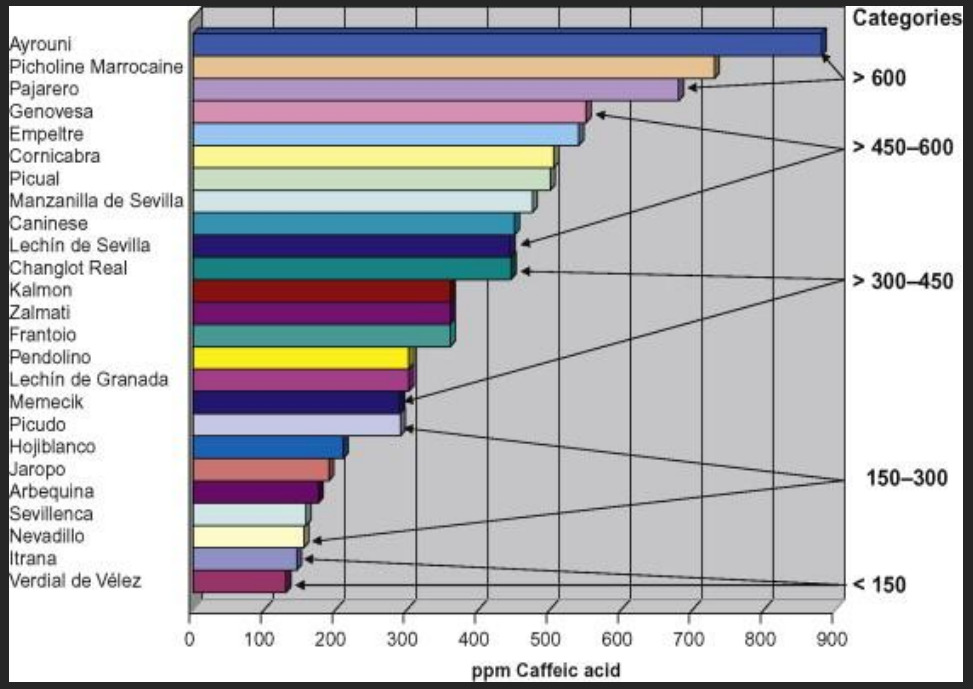
Polyphenols – Why Taste Matters

	Compounds	Correlated attributes
Phenolic acids	Benzoic, Cinnamics, Vanillic, Gallic, Coumaric and Caffeic acids	
Flavons	Luteolin, Apigenin, Quercitin	
Lignans	Pinoresinol & Acetoxypinoresinol	
Phenyl-ethy alcohol	Hydroxytyrosol, Tyrosol	Bitter
Secoiridoids	All Oleuropein and Ligstroside derivates (except Hydroxytyrosol & Tyrosol)	
	Aglycon derivatives of Oleuropein & Ligstroside	Pungency
	Dialdehydic forms of Ligstroside aglycon	Burning sensation
	Dialdehydic forms of Oleuropein aglycon	Little burning sensation
	Oleocanthal	Pungent
	Aldehydic and Dialdehydic forms of Oleuropein aglycon	Bitterness
	Aldehydic forms of Oleuropein aglycon	Bitterness
	3,4-DHPEA-EDA	Bitter
	3,4-DHPEA-EA	Bitter
	p-HPEA-EDA	Bitter, Pungent, Astringent

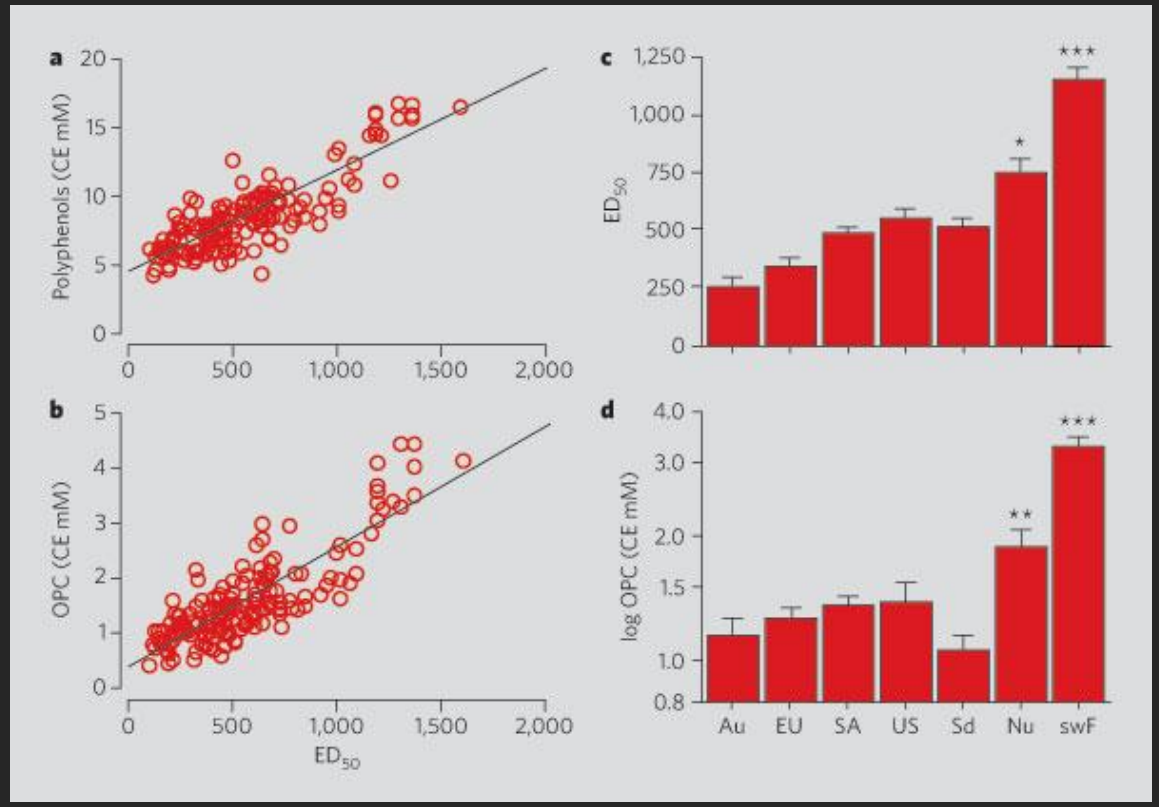
Correlations between phenolic compounds and taste perceptions and related references.

Short name	Common name	Sensory description	References
3,4-DHPEA-EDA	decarboxymethyl oleuropein aglycon	main compound responsible for bitter taste	Kiritsakis, 1998;
3,4-DHPEA-EA	oleuropein aglycon	main compound responsible for bitter taste	Garcia *et al.*, 2001
p-HPEA-EDA	decarboxymethyl ligstroside aglycon	main compound responsible for bitter and pungent notes	Tovar *et al.*, 2001
3,4-DHPEA-EDA	decarboxymethyl oleuropein aglycon	high positive correlation between these compounds and bitterness intensity of olive oil	Gutiérrez-Rosales *et al.*, 2003
3,4-DHPEA-EA	oleuropein aglycon		
p-HPEA-EDA	decarboxymethyl ligstroside aglycon		
p-HPEA-EDA	decarboxymethyl ligstroside aglycon	main compound responsible for the pungent sensation on back of the tongue	Andrewes *et al.*, 2003
3,4-DHPEA-EA	oleuropein aglycon	a highly significant correlation with bitter taste of olive oil	Mateos *et al.*, 2004
3,4-DHPEA-EA	oleuropein aglycon	positive correlation between this compound and bitterness and pungency intensity of several Spanish and Italian olive oils	Cerretani *et al.*, 2008
Secoiridoids	all oleuropein and ligstroside derivatives considered except for hydroxytyrosol and tyrosol	relevant predictors of the static and dynamic analysis for bitterness and pungency	Esti *et al.*, 2009
p-HPEA-EDA	decarboxymethyl ligstroside aglycon	effective only for predicting pungency	

Varietal Variation in Total Polyphenols



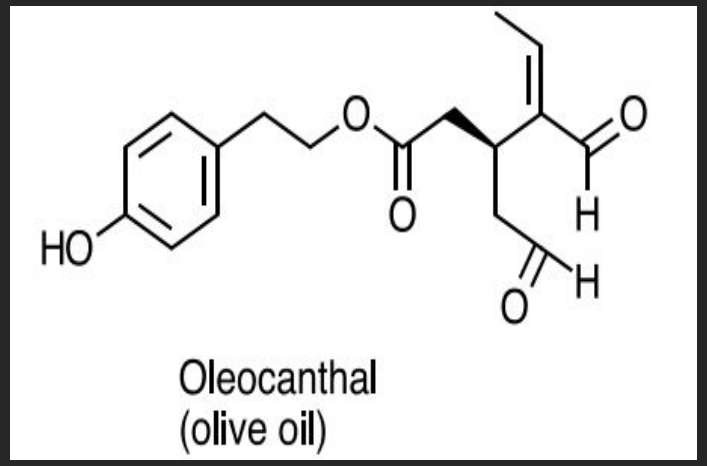
It’s Not Just EVOO
Red Wine Procyanidins – A Powerful Effect on Blood Vessels



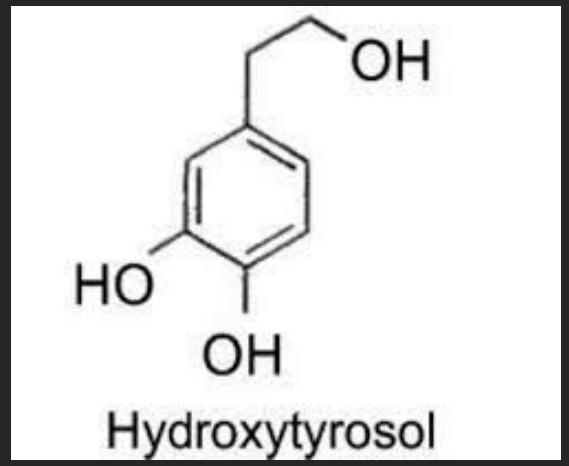
Unique Antioxidants and/or Anti-inflammatories & EVOO

- Vitamin E
- Squalene
- Lignans
- Polyphenols (>36 identified)
  - Oleuropein
  - Oleocanthal
  - Hydroxytyrosol and its Derivatives

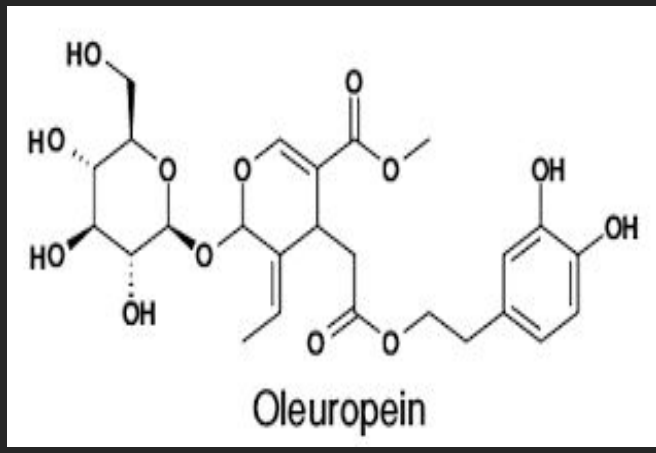
3 of the 36



Oleocanthal
(olive oil)

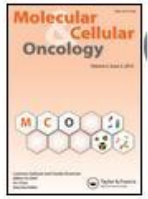


Hydroxytyrosol



Oleuropein

Oleocanthal – Stinging Cancer Cells



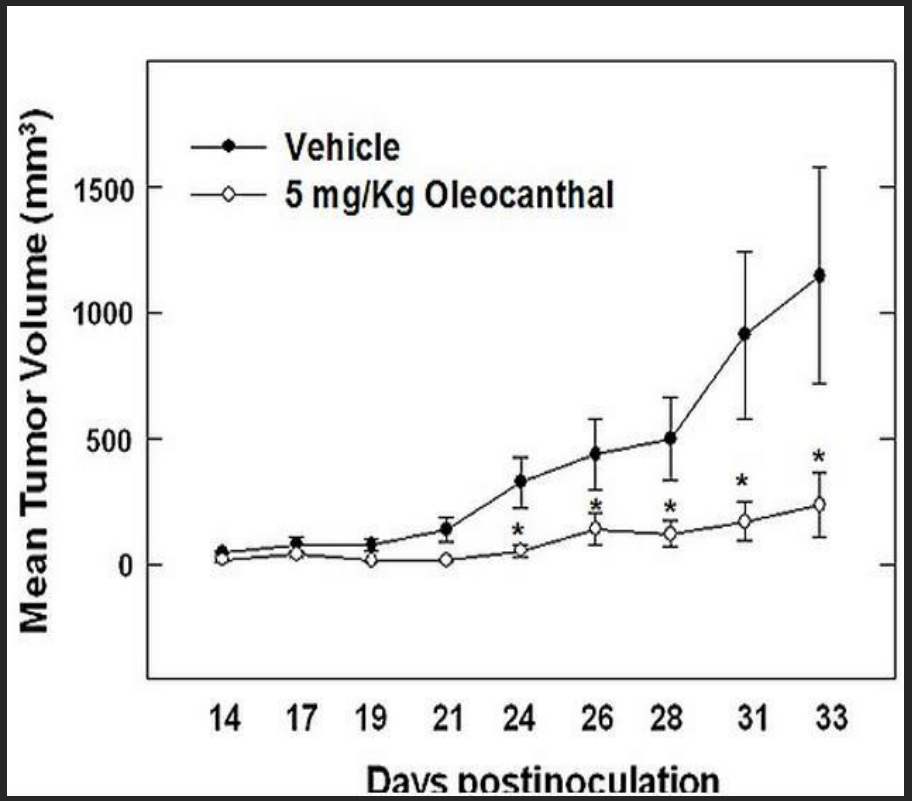
(-)-Oleocanthal rapidly and selectively induces cancer cell death via lysosomal membrane permeabilization (LMP)

DOI: 10.1080/23723556.2015.1006077
O LeGendre[ab*], P A S Breslin[cd] & D A Foster[a*]
Publishing models and article dates explained

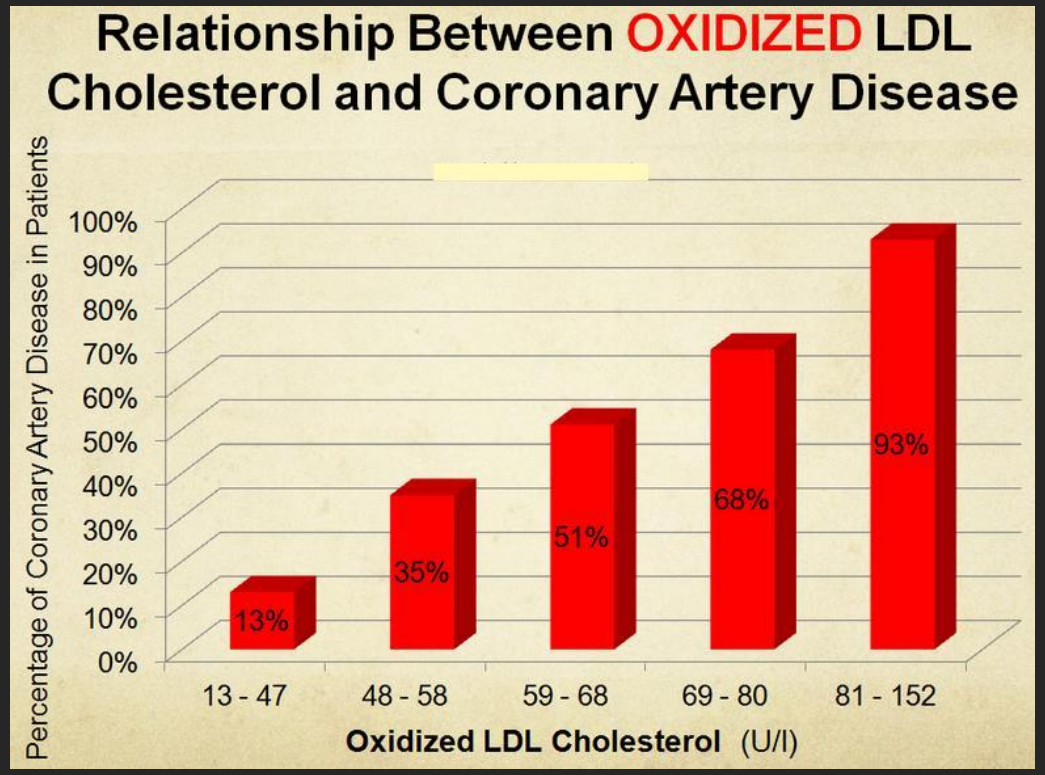
Received: 2 Aug 2014
Accepted: 7 Jan 2015
Accepted author version posted online: 23 Jan 2015

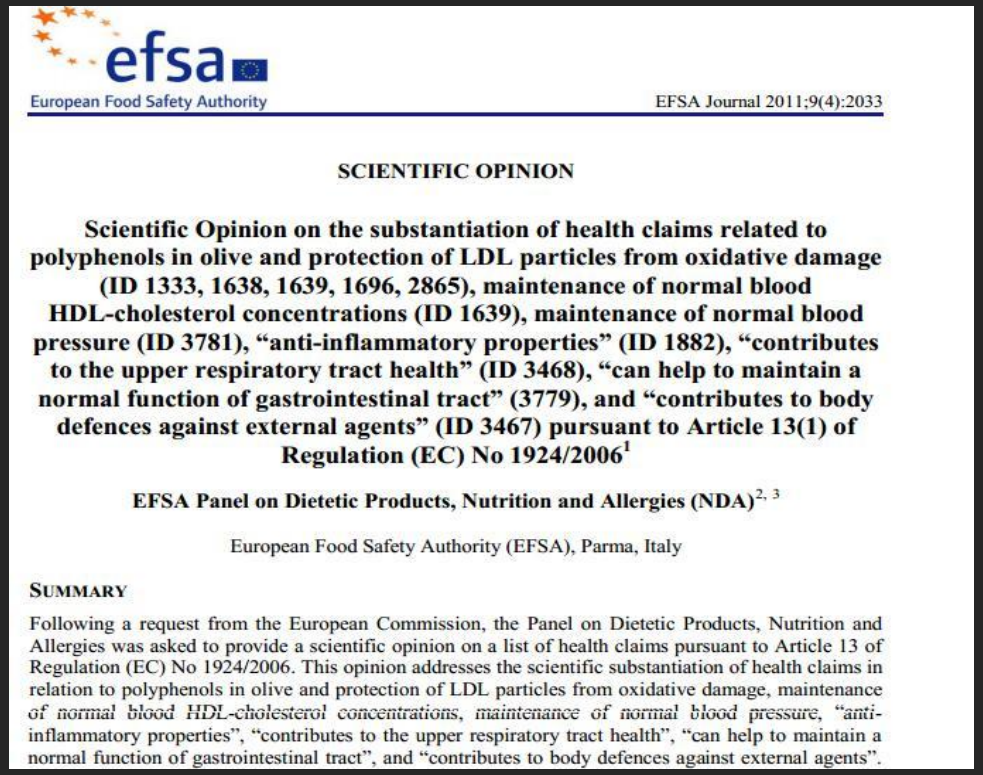
Abstract

(-)-Oleocanthal (OC), a phenolic compound in extra virgin olive oil (EVOO), has been implicated in the health benefits associated with diets rich in EVOO. We investigated the effect of OC on human cancer cell lines in culture. Amazingly, OC induced cell death in all cancer cells examined – as rapidly as 30 minutes after treatment in the absence of serum.



Tyrosols, Oxidative Stress and the Inflammation of Heart Disease





efsa
European Food Safety Authority
EFSA Journal 2011;9(4):2033

SCIENTIFIC OPINION

Scientific Opinion on the substantiation of health claims related to polyphenols in olive and protection of LDL particles from oxidative damage (ID 1333, 1638, 1639, 1696, 2865), maintenance of normal blood HDL-cholesterol concentrations (ID 1639), maintenance of normal blood pressure (ID 3781), "anti-inflammatory properties" (ID 1882), "contributes to the upper respiratory tract health" (ID 3468), "can help to maintain a normal function of gastrointestinal tract" (3779), and "contributes to body defences against external agents" (ID 3467) pursuant to Article 13(1) of Regulation (EC) No 1924/2006[1]

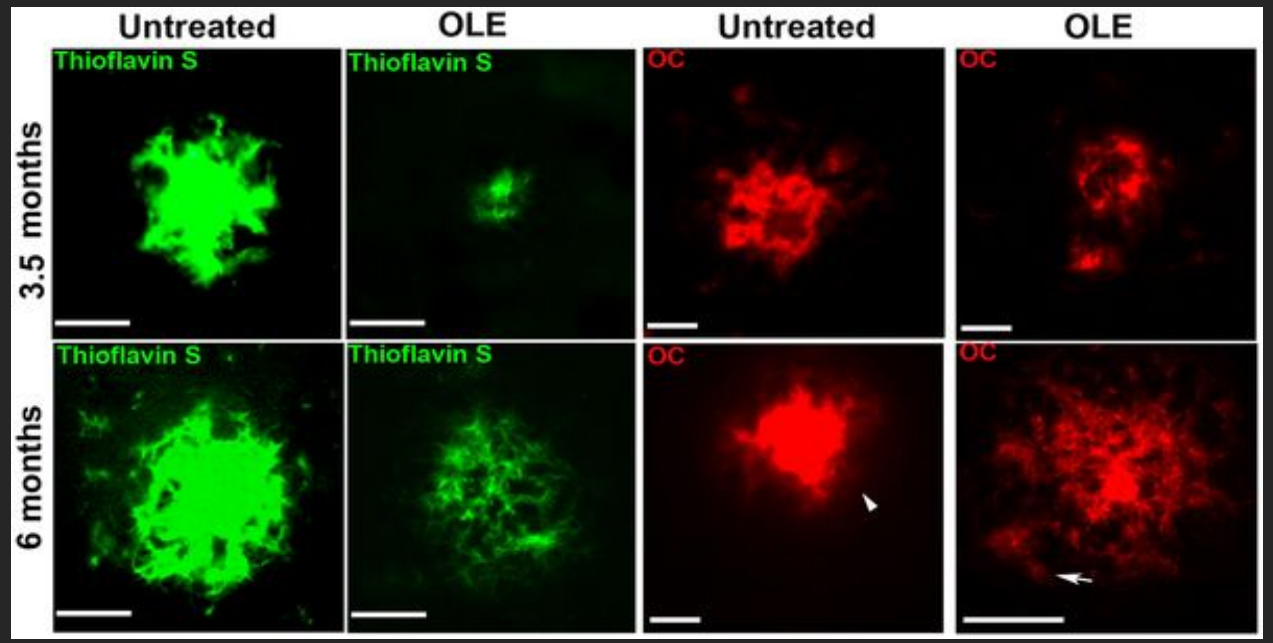
EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA)[2, 3]

European Food Safety Authority (EFSA), Parma, Italy

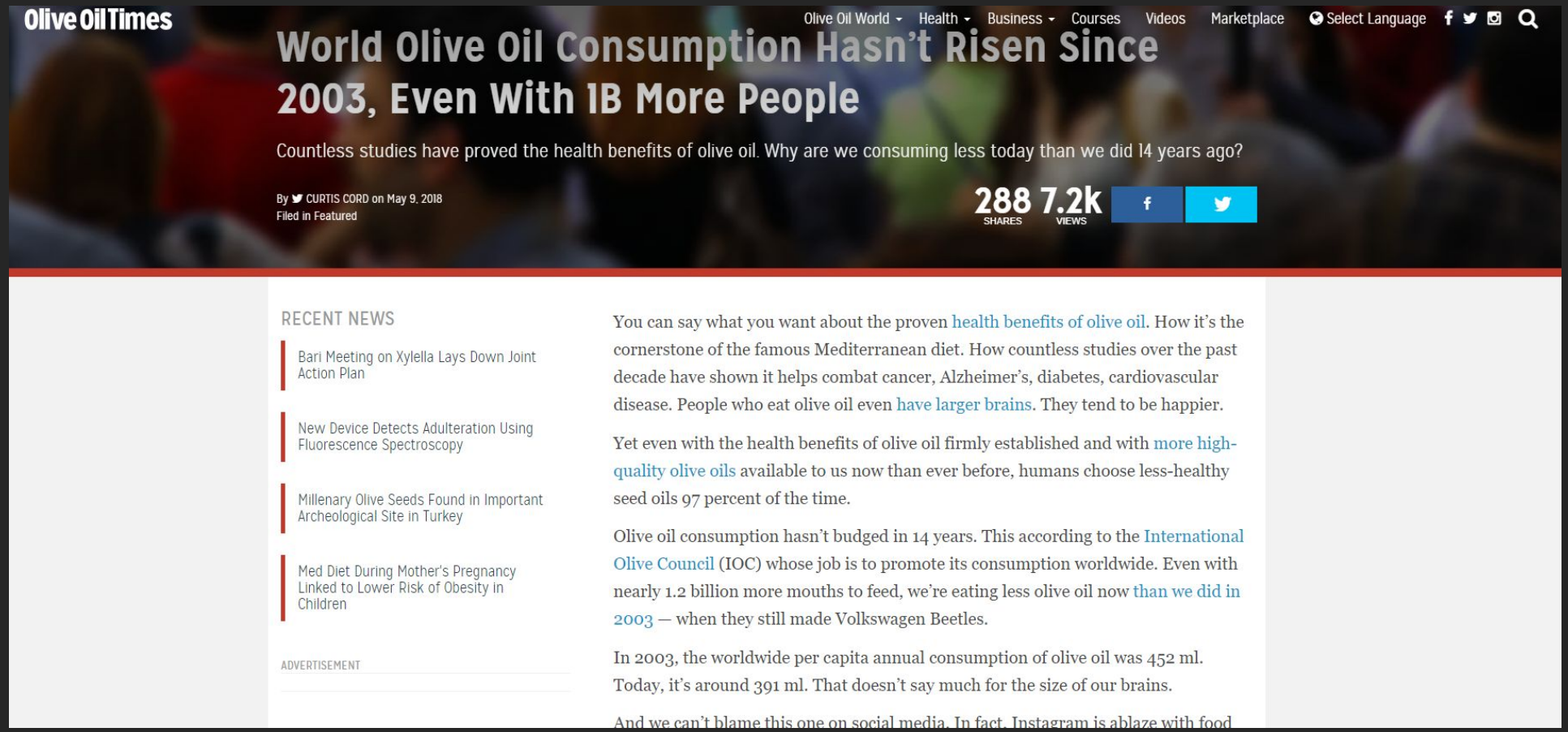
SUMMARY

Following a request from the European Commission, the Panel on Dietetic Products, Nutrition and Allergies was asked to provide a scientific opinion on a list of health claims pursuant to Article 13 of Regulation (EC) No 1924/2006. This opinion addresses the scientific substantiation of health claims in relation to polyphenols in olive and protection of LDL particles from oxidative damage, maintenance of normal blood HDL-cholesterol concentrations, maintenance of normal blood pressure, "anti-inflammatory properties", "contributes to the upper respiratory tract health", "can help to maintain a normal function of gastrointestinal tract", and "contributes to body defences against external agents".

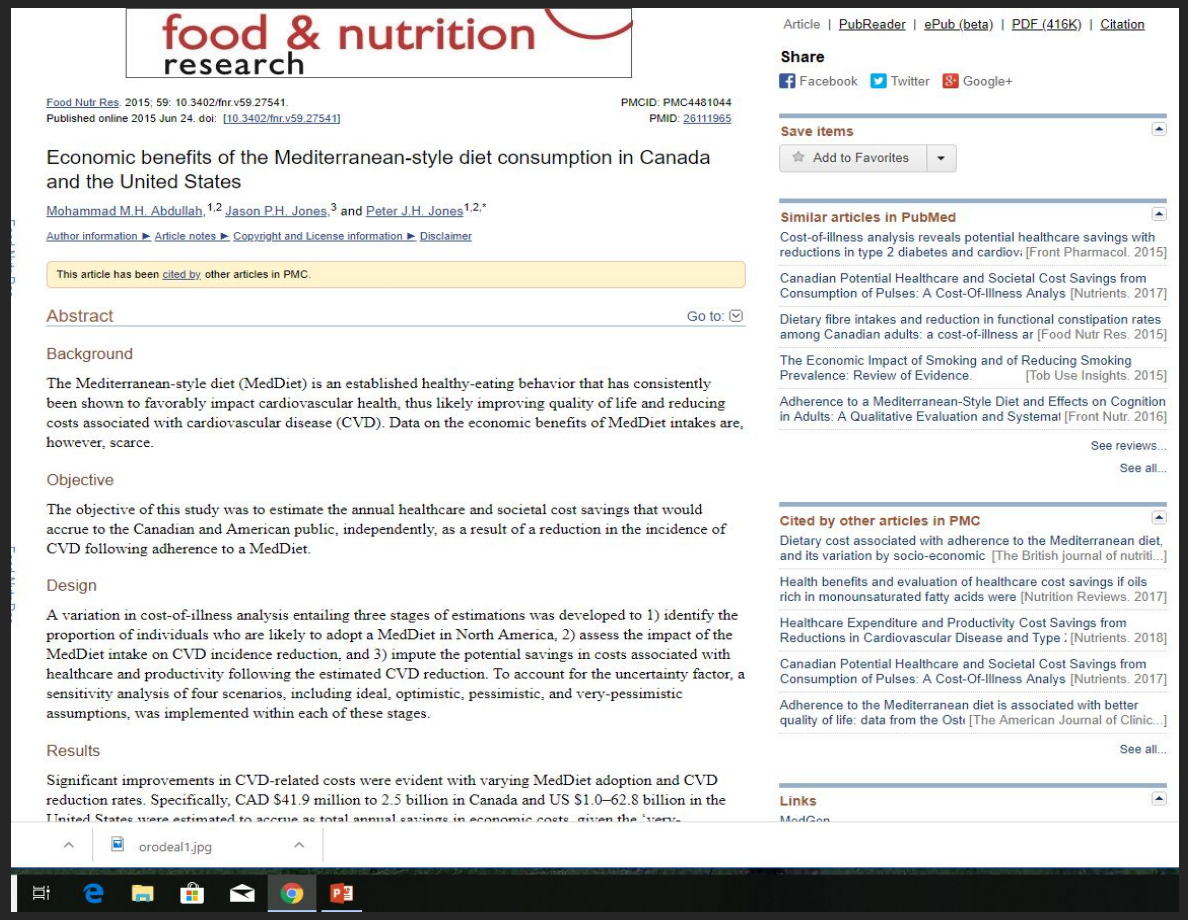
OLE - Oleuropein modifies Aβ plaque load and morphology in the brains of TgCRND8 mice. A marker for Alzheimer's Disease.



The Challenges



Extra Virgin Olive Oil Production and Consumption – Opportunities (and a Matter of Public Health)



food & nutrition research

Food Nutr Res. 2015; 59: 10.3402/fnr.v59.27541. Published online 2015 Jun 24. doi: [10.3402/fnr.v59.27541]

PMCID: PMC4481044 PMID: 26111965

Economic benefits of the Mediterranean-style diet consumption in Canada and the United States

Mohammad M.H. Abdullah,[1,2] Jason P.H. Jones,[3] and Peter J.H. Jones[1,2,*]

Author information ▶ Article notes ▶ Copyright and License information ▶ Disclaimer

This article has been cited by other articles in PMC.

Abstract

Go to:

Background

The Mediterranean-style diet (MedDiet) is an established healthy-eating behavior that has consistently been shown to favorably impact cardiovascular health, thus likely improving quality of life and reducing costs associated with cardiovascular disease (CVD). Data on the economic benefits of MedDiet intakes are, however, scarce.

Objective

The objective of this study was to estimate the annual healthcare and societal cost savings that would accrue to the Canadian and American public, independently, as a result of a reduction in the incidence of CVD following adherence to a MedDiet.

Design

A variation in cost-of-illness analysis entailing three stages of estimations was developed to 1) identify the proportion of individuals who are likely to adopt a MedDiet in North America, 2) assess the impact of the MedDiet intake on CVD incidence reduction, and 3) impute the potential savings in costs associated with healthcare and productivity following the estimated CVD reduction. To account for the uncertainty factor, a sensitivity analysis of four scenarios, including ideal, optimistic, pessimistic, and very-pessimistic assumptions, was implemented within each of these stages.

Results

Significant improvements in CVD-related costs were evident with varying MedDiet adoption and CVD reduction rates. Specifically, CAD $41.9 million to 2.5 billion in Canada and US $1.0–62.8 billion in the

Article | PubReader | ePub (beta) | PDF (416K) | Citation

Share

Facebook Twitter Google+

Save items

Add to Favorites

Similar articles in PubMed

Cost-of-illness analysis reveals potential healthcare savings with reductions in type 2 diabetes and cardiov [Front Pharmacol. 2015]

Canadian Potential Healthcare and Societal Cost Savings from Consumption of Pulses: A Cost-Of-Illness Analys [Nutrients. 2017]

Dietary fibre intakes and reduction in functional constipation rates among Canadian adults: a cost-of-illness ar [Food Nutr Res. 2015]

The Economic Impact of Smoking and of Reducing Smoking Prevalence: Review of Evidence. [Tob Use Insights. 2015]

Adherence to a Mediterranean-Style Diet and Effects on Cognition in Adults: A Qualitative Evaluation and Systemat [Front Nutr. 2016]

See reviews...

See all...

Cited by other articles in PMC

Dietary cost associated with adherence to the Mediterranean diet, and its variation by socio-economic [The British journal of nutriti...]

Health benefits and evaluation of healthcare cost savings if oils rich in monounsaturated fatty acids were [Nutrition Reviews. 2017]

Healthcare Expenditure and Productivity Cost Savings from Reductions in Cardiovascular Disease and Type [Nutrients. 2018]

Canadian Potential Healthcare and Societal Cost Savings from Consumption of Pulses: A Cost-Of-Illness Analys [Nutrients. 2017]

Adherence to the Mediterranean diet is associated with better quality of life: data from the Ost [The American Journal of Clinic...]

See all...

Links

MedGen

orodeal1.jpg

EveningStandard. News Election 2017 Football Going Out Lifestyle Showbiz

News › UK

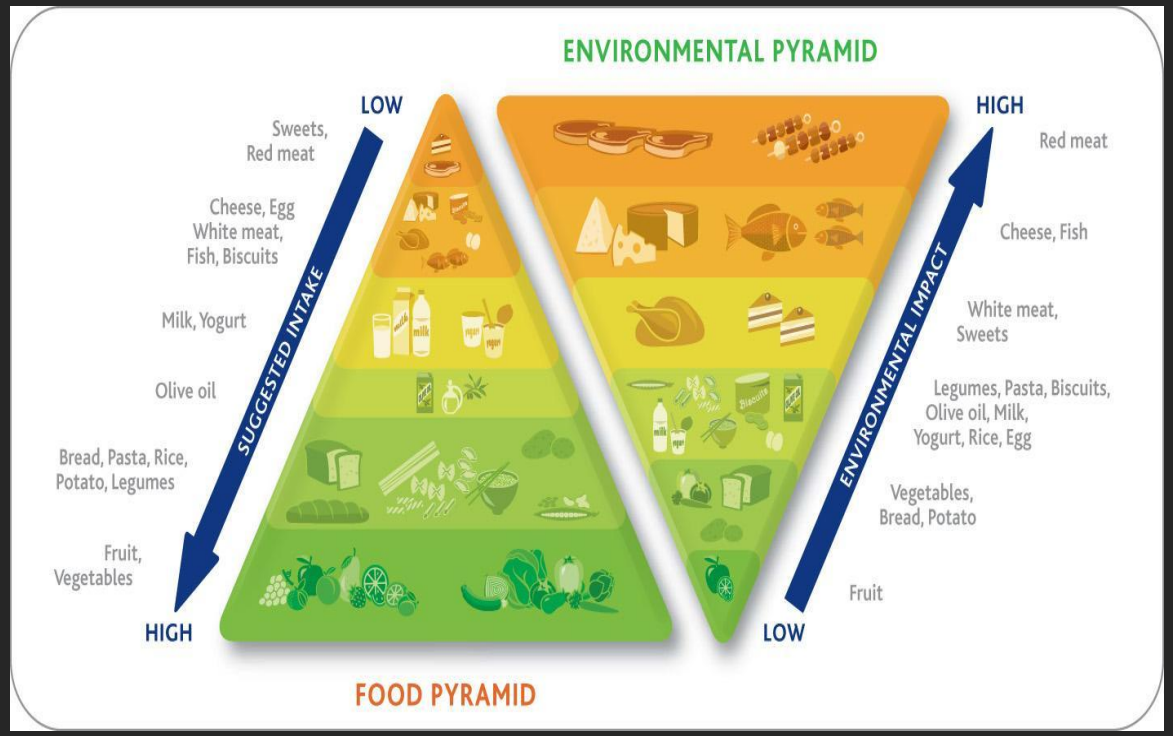
Eating Mediterranean diet could prevent 19,000 UK deaths, Cambridge University scientists claim

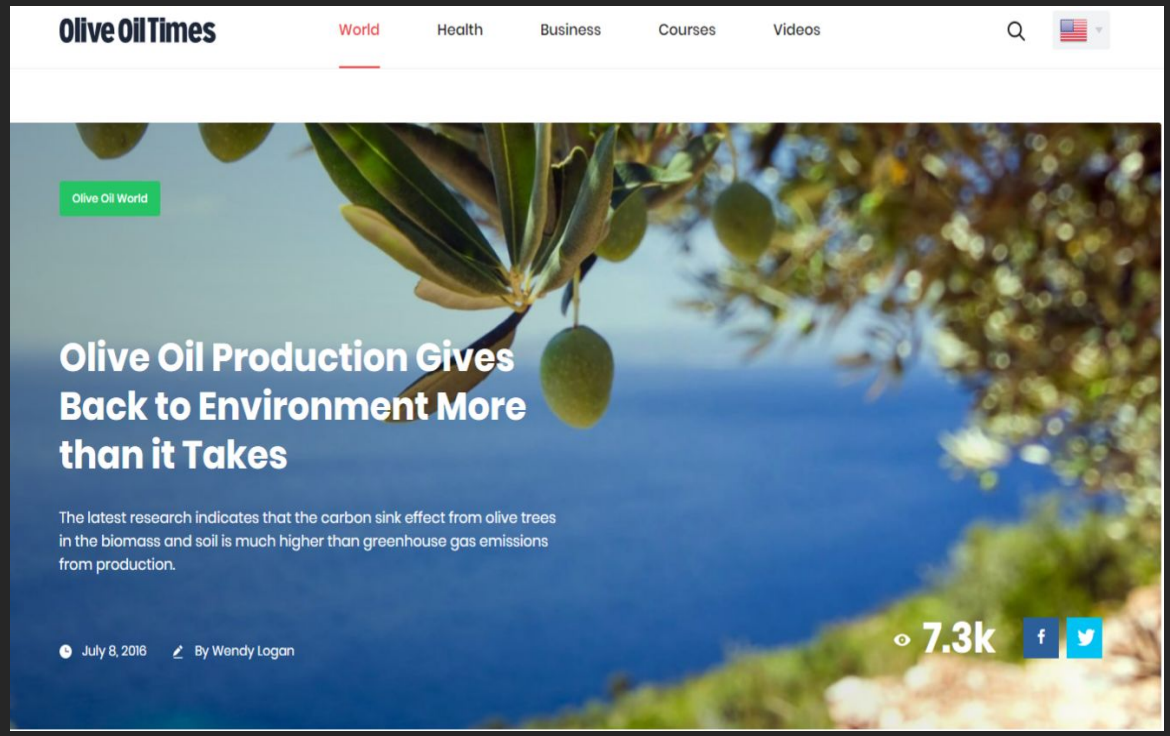
JAMIE MICKLETHWAITE | Thursday 29 September 2016 07:38 BST | 3 comments

34 shares

Like Click to follow The Evening St

Extra Virgin Olive Oil Production and Consumption – Opportunities (and a Matter of Planetary Survival)





Extra Virgin Olive Oil Education

EVERY DAY – 30ml+ extra virgin olive oil, inseparably at the heart of the healthy Mediterranean Diet, with independently measurable health benefits. The 40/80 Paradigm

TASTE – the experience of different extra virgin olive oils for healthy cooking, preparation and finishing.

UNDERSTANDING –polyphenols & the unique anti-inflammatory, antioxidant benefits of extra virgin olive oil. *******

Opportunities for Producers

- Joint Initiatives – Tell the Story of Good Fats and Polyphenols – Antioxidants and Anti-inflammatory Components; Inseparable from the Med Diet
- Education Opportunities – Tourism, Seminars
- Taste Education
- Information Platforms – Olive Wellness Institute
- Trade Asscoations
- Telling Individual, Global and Historic Stories – Web and Social Media
- Health Claims
- On Label Information
- Provenance

Thank You