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**NIIM**  
NATIONAL INSTITUTE OF  
INTEGRATIVE MEDICINE

**Professor Avni Sali AM**  
MBBS PhD FRACS FACS FACNEM

Director - National Institute of Integrative  
Medicine

Melbourne, Gold Coast

[www.niim.com.au](http://www.niim.com.au)



# INTEGRATIVE MEDICINE

Why it is the best form of  
Medicine

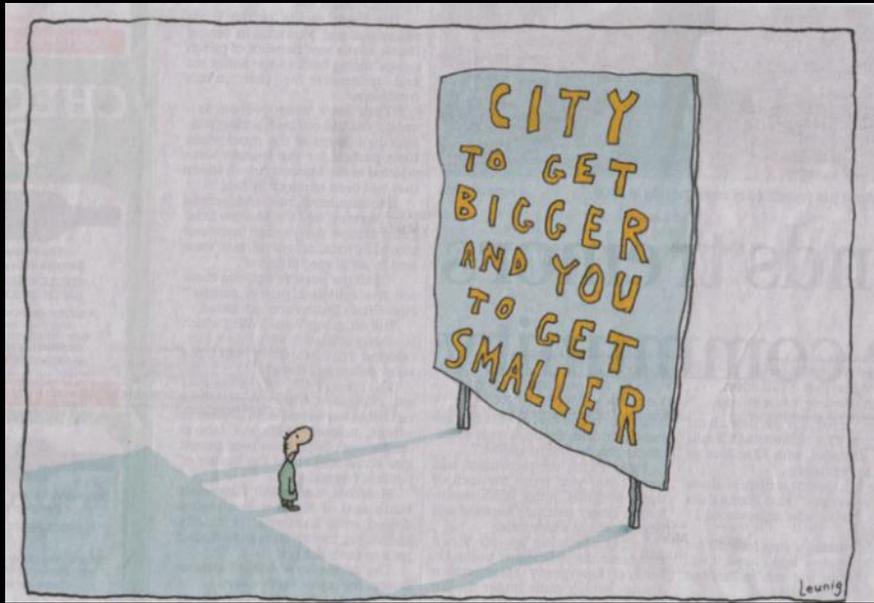




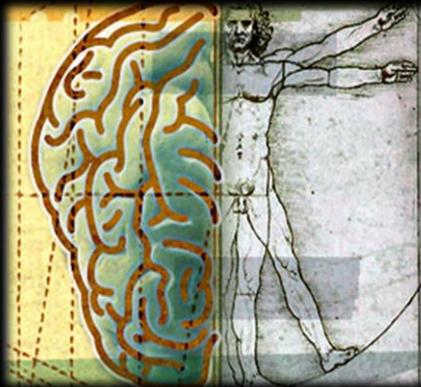
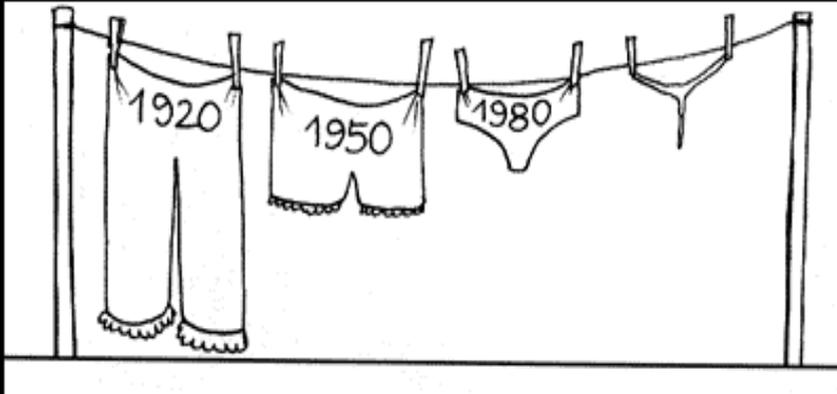
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## Evidence of Global Warming...



What is  
Integrative  
Medicine?

# Integrative Medicine



## Definition

Integrative Medicine (IM) is about **all** evidence-based medicine including complementary medicine -

- major interest on the cause of the disease
- patient is a participant in getting better
- making the patient as healthy as possible



## The World Health Organization (WHO)

### Traditional Medicine Strategy 2014-2023

Highlights contribution that complementary medicines make to health, wellness and people-centred healthcare, via appropriate integration of complementary medicines into the healthcare system.

## CAM more popular



### USA

- More visit CAM providers in 1990's than to all primary care physicians – Population cost = \$13b

### Australia

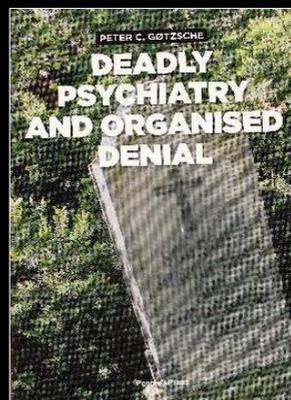
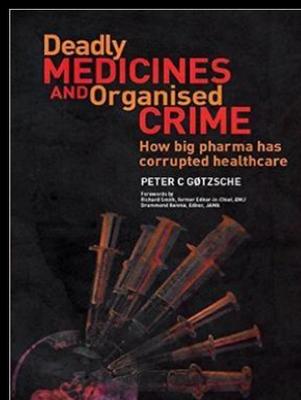
Rakel D 'Integrative Medicine' 2012

- As widely used as conventional medicine
- Consultations: 69 Million to both
- Population Cost = \$4.13 billion



Xue C et al, J Comp and Alt. Med.2007; 13:643-

## The problem with conventional medicine...



# National Institute of Integrative Medicine (NIIM)



Melbourne



Gold Coast

## NIIM 3 Pillars



NIIM

**CLINIC**

- Clinicians
- Services

**RESEARCH**

- Numerous projects

**EDUCATION**

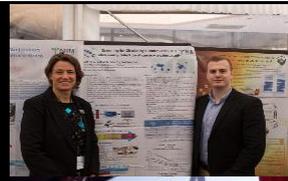
- Online Courses
- Annual Symposium

**EVENTS**

- Free Public Lectures
- Clinical Workshops
- Fundraising Events

**MEDIA**

- Publications / Expert Advice



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**NIIM Clinic Services**

- National leader in treatment of chronic disease
- Integrative GPs
- Complementary Healthcare Practitioners
- Cancer therapies - Hyperthermia, Hyperbaric, PDT
- Intravenous Therapies
- Psychiatry
- Toxicology
- Chinese Medicine
- NIIM Kids
- Pregnancy & Brain Centers
- Others



# Health & Healing



## Principles of Health

- Reduce Life Stresses
- Unloading / Relaxation
- Adequate Sunlight
- Sleep
- Exercise/Daily Walk
- Healthy Food
- Supplements



# Mind-Body Medicine



## What is Mind-Body Medicine?

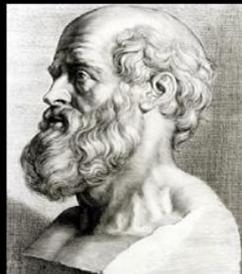
### Mind Body Medicine –

most important area in medicine

Interactions of behaviour, mind and body –  
directly affecting body mechanisms which in turn  
influence health

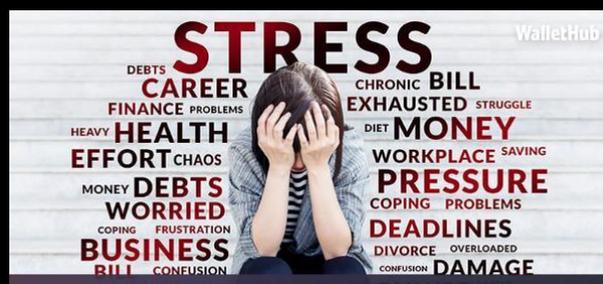


*The natural healing force within each one  
of us is the greatest force in getting well*



Hippocrates

# Stress



## Stress & Chronic Diseases



Stress – involved in every chronic illness

- Cardiovascular
- Cancer
  - Bowel
  - Breast
  - Prostate
- Diabetes
- Alzheimer's
- Eye Diseases
- Osteoporosis



## Stress



Psychological stress and mortality

English Study

- Meta-analysis cohort studies
- 68,222 people aged 35 years+

### Results

- Increased risk of mortality - dose-response
- Risk of mortality raised even at lower levels of distress



Russ TC, et al. *BMJ* 2012;345:e4933

# Stress



## Major Causes of Stress

- Loss of a close one
- Divorce / Marital / Relationship breakdown
- Loss of Job / Change of job
- Change of home
- Work demands

Holmes-Rahe Stress Inventory



## General Stress Reduction



### STORAGE

Excessive storage

**Unloading** - chatting with confidante; group therapy; art; writing etc.

### MEDITATION / RELAXATION

**THERAPIES** e.g. Vegetable Garden; Music, Pets etc

### SLEEP

### EXERCISE



## General Stress Reduction



### UNLOADING storage



## Loneliness



- 1/3<sup>rd</sup> population affected in developed countries, and increasing
- Identified as bad as smoking and greater than obesity
- Linked to heart disease, cancer, depression, diabetes, suicide, other
- 26% increase in the risk of premature mortality

Cacioppo JT, et al. The neuroendocrinology of social isolation. *Annu Rev Psychol* 2015; 66: 733–67.



## UK Parliament 2018



### Appoints Minister for Loneliness - Tracey Crouch

#### Problems

- Stiff-upper lip
- Buttoned up
- Grinning & bearing it
- Keep Calm & Carry on



## The Secret to Living Longer

Prof Julianne Holt-Lunstad's Research

### Boston Longevity Study

#### Key Factors for longevity

1. **Close relationships** - love, friendship, family, support etc.
2. **Social integration** - face-to-face contact

Longevity =

25% genes

75% lifestyle



*Public Policy & Aging Report, Volume 27, Issue 4, Dec 2017, P127-130*



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## Meditation



### Helps...

- Disease prevention / treatment
- Stress reduction
- Sleep disturbance
- Addictions
- Eating disorders
- Memory
- Muscle tension / pain
- Fatigue
- Other



## Depression





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The Age 16 May 2016

## Depression



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### Anti-Depression Drugs

1 in 10 Australian Adults use daily

- Australian use – doubled over last decade
- Iceland – only country higher rate of use
- Most anti-depressant drugs are ineffective



Med J Aust 2016; 204 (9): 348-350

## Cuddles Change Genes



### US Study

94 Healthy Children

5 Year observation - Genetic Testing

### Results

Babies with less cuddles

- Genetically less developed
- Future health consequences – immunity, metabolism



Moore SR, et al, Epigenetic correlates of neonatal contact in humans", *Dev & Psychopathology*, online Nov 2017

## Depression & Multivitamins



### Double blind study

Assessment

- Depression, anxiety & stress scale (DASS)

### Results

- reduced Homocysteine
- increased Vitamin B12 & Folate
- reduced depression and stress



Harris E, Sali A et al Proc. 3<sup>rd</sup> Int Cong. CM Research 3/2008

## Depression & Vitamin D



### USA Study

12,600 participants  
2006 – 2010



### Results

- Higher vitamin D –  
    ↓ decreased depression
- Lower vitamin D –  
    ↑ increased depression

Sherwood Brown et al Mayo Clin Proc 2012

## Depression & Exercise



### USA Study

300,000 Adults

### Results

- higher levels of physical activity = lower odds of major depression
- Exercise = protective



Choi, KW et al, JAMA Psychiatry. online Jan23, 2019

## Food & Mood



### London Study

Processed compared to whole foods

#### Results:

- Depression  $\uparrow$  processed foods  
(sweets, fried foods, white bread)
- Depression  $\downarrow$  healthy foods  
(vegetables, fruit, fish)



Akbaraly T et al Br J Psychiatry 2009; 195:408-

## HOW WE PLAYED 'ONLINE'



**BACK IN THE DAY**



# Exercise



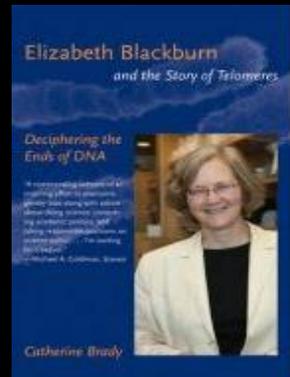
*'Sit Less - Move More'*

## Benefits of Regular Exercise

Regular exercise is important

- Helps maintain a normal weight
- Good for mood
- Reduces the amount of stress hormones
- Helps bone and muscle development/strength
- Boosts blood circulation – good for brain
- Good for strong immune system





## Exercise delays Telomere shortening



### Questionnaire study

2401 twins  
Health information  
Telomere length measured



### Results

Less physical activity =  
Shorter telomere length up to ten years  
and older

Spector T et al. Arch Int Med 2008;168:154



# Sleep



## Sleep & Obesity



### Australian Study

40,834 Middle aged Australians

### Results

- Sleep <7 hours a night associated with obesity



Magee CA et al Epidemiology 2009; Oct 29 online

## Sleep



### Painkiller

- Longer Sleep – tolerate pain better
- Similar to taking 30-60mg Codeine
- Tired body produces chemicals that sensitize the body to pain



Roth T et al Sleep Med Reviews 2007; 11:71

# Sleep – Breast Cancer



## USA Study

97 Women advanced breast cancer

6 Year study

Average age – 55 years

Assess sleep quality



## Results

- Quality of sleep shown to be predictive of survival

Palesh.O et al. *SLEEP*, 2014; DOI: 10.5665/sleep.3642



# Weight



## Obesity

### UK Report

- Shortens life by 13 years
- Smoking 10 years

### Ideal Waist Size

- 95cm Males
- 80cm Females



## Weight & Obesity



### Australia – overweight or obese

- 63% Adults



- 25% Children

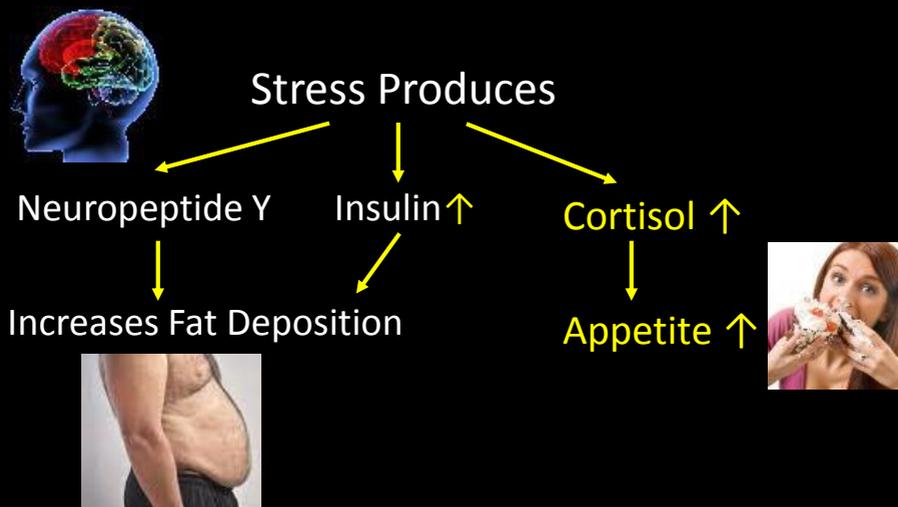


### Overweight and obesity –

second highest contributor to disease burden after diet

Aust Bureau Stats 2011-12

## Stress & Obesity



KMO L E et al Nature Med 2007; 13:803-

# Sugar



The World Health Organisation March 2015

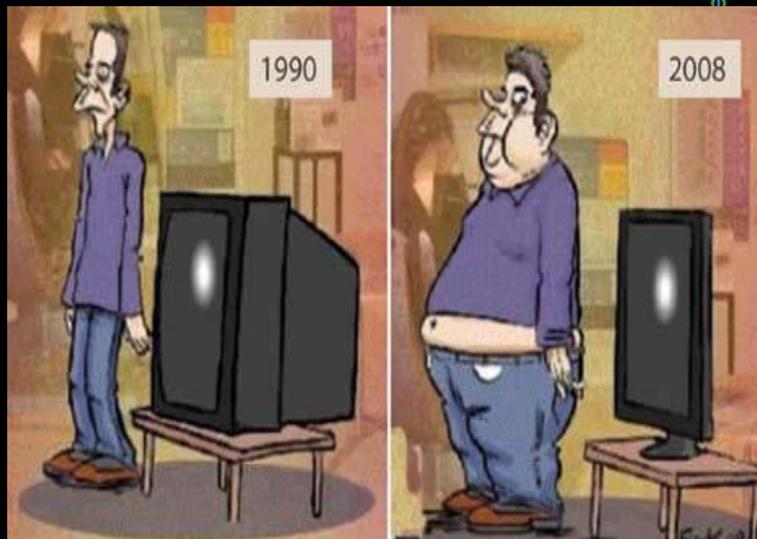
recommended just 6 teaspoons of  
added sugar p/day



Australian's average 27 teaspoons/day



2012 report Sugar Consumption in Australia



# Dietary Advice



## Poor Diet

**Lancet global burden of disease**

**Poor diet**

contributes to more disease than physical inactivity, smoking and alcohol combined



Lancet Global Burden of Disease 2010-15

## Australians Fruit & Vegetable Consumption



### Australians

**93%** not eating recommended vegetables p/day  
– (5 p/day)

**70%** not eating recommended amount of fruit p/day  
– (2 p/day)



A.B.S. 2011-12 National Nutrition and Physical Activity Survey (NNPAS).

## The Health Benefits of Olive Oil



## Mediterranean Diet & Health



**Meta-analysis of 12 studies**  
1,574,299 subjects

Mediterranean diet –

### Reduced

- Overall mortality
- Alzheimer's disease



Sofi F BMJ 2008;337 - online



## Cooking with Olive Oil



Is it safe to cook with EVOO?

**YES!** *It is very healthy to cook with EVOO*

**Why?**

Least Polar compounds as a result of heating

Highest Antioxidants keep oil stable



De Alzaa F, et al Acta Sci Nut Health Vol 2 Issue 6 June 2018

## Cooking with Olive Oil - Polar Compounds

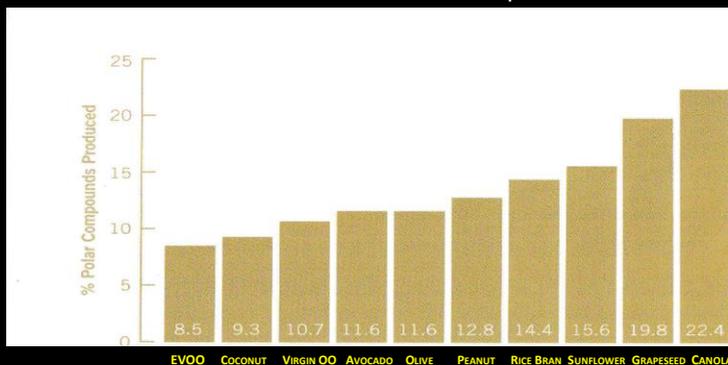


**Australian Study**

Compared oils - 180°C heat for 6hrs & 240°C for 20mins

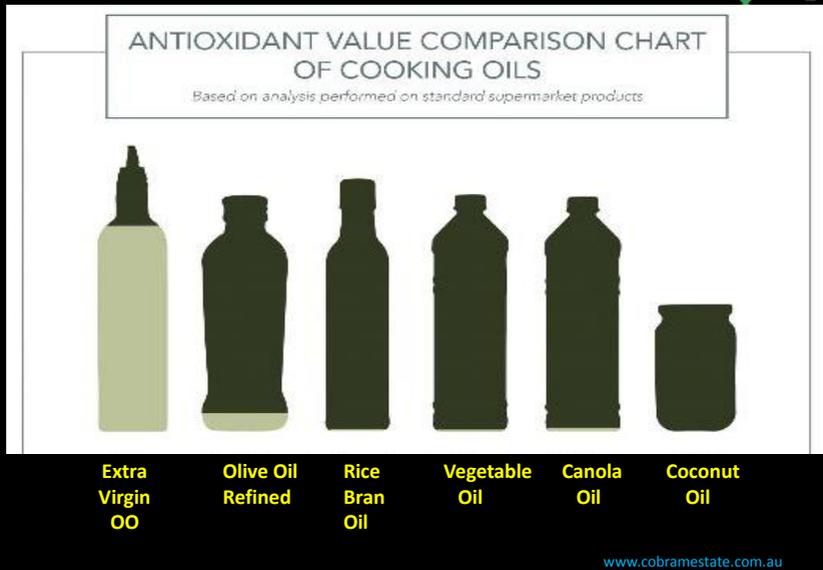
**Results**

- EVOO Produced lowest levels of Polar Compounds



De Alzaa F, et al Acta Sci Nut Health Vol 2 Issue 6 June 2018

## Olive Oil - Antioxidants



## Cooking Oil Fumes

### Oils - Carcinogenic contents

From most to least

- Safflower
- Vegetable
- Corn
- Olive



Chiang T et al. *Envir Res Sect A* 1999, 81:21-22

## Acrylamides



Result from reaction of amino acids and reducing sugars during heating (toasting) of starch rich foods.

Shown to cause cancer in animal studies.



Mottram DS et al Nature 2002;419:448

## Mediterranean Diet – Cancer Prevention



Multiple Studies show that Mediterranean Diet prevents cancer

Olive Oil is most likely to be the key factor of this diet



Martin-Moreno JM<sup>1</sup>, Int J Cancer. 1994 Sep 15;58(6):774-80

## Popeye & Olive Oyl



# Fats



# Fats

## Types

OMEGA 0

OMEGA 3

OMEGA 6

OMEGA 9



## Omega 0 Fats

### Cholesterol – New Guidelines

Low fat diet including  
animal products, eg butter, cheese, eggs  
No longer **'Bad'**



No significant relationship between dietary  
cholesterol and blood cholesterol

*'How did experts get it so wrong?'*



## Omega 3 Fats



### Functions

- Reduces blood stickiness
- Modify Chol/trig
- Immune modulation
- Anti-inflammatory
- Toxic to cancer cells
- Improves mood
- Improves memory
- Other



## Pregnancy & Fish Oil



### US Study

197 Pregnant Mothers

Daily 600mg DHA Supplement

Assessed infants pre-term or not

### Results

- 58% reduction in pre-term births



Shireman T et al, Prostagl Leuk & Ess EFAs 2016 111, 6-10

## Omega 9

- Olive oil
- Avocado



## Coffee Consumption



### Spanish Study

19,896 Participants  
Up to 17yr follow-up

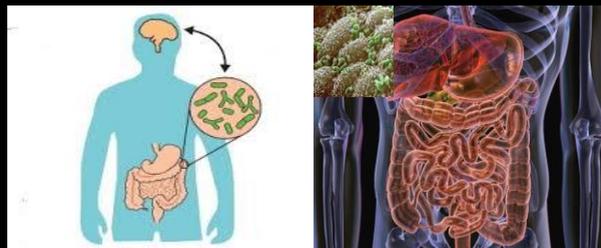


### Results

- Higher coffee consumption –  
lower risk of early death

Navarro A et al, Eur Soc Cardiol Aug 2017

## Gut Flora / Microbiome



*Hippocrates "All disease begins in the gut"*

## Gut Microbiome



### Gut Microbiome

- Estimated number – 100 trillion
- human cells – one-tenth to one-third of microbiome



## Gut Microbiome



### **Prebiotics:** *Foods*

Onion family, Honey, Artichoke, Asparagus, Soy, Wheat, Oats, Barley, Bananas, Almonds, Pistachio

### **Probiotics:** *Foods*

Yoghurt, Fermented Foods eg Sauerkraut, Kimchi, Kefir...

### **Supplements**



## Pregnancy & Antibiotics



### Asthma

300 Mother-Child pairs  
Follow-up 3 years



### Results

- Antibiotics 2<sup>nd</sup> and 3<sup>rd</sup> Trimester cause Asthma
- Twice as many Asthmatic children

Lapin B et al Ann of Allergy Asthma Immun 2016 online

## Antibiotic Abuse



### Worldwide Study

First Year of Life- Australian Babies

- 50% given antibiotics (almost always unnecessarily)
- 2<sup>nd</sup> highest over-use in world



Anderson H. et al, Murdoch Children's Res Inst – Jour Paed & Child Health, July 2017

my iPad



# Chronic Diseases



## Chronic Diseases

- Cardiovascular Disease
- Cancer
  - Bowel
  - Breast
  - Prostate
- Diabetes
- Alzheimer's Disease
- Eye Diseases
- Osteoporosis



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## Osteoporosis



# Osteoporosis



## Risk Factors

- Vitamin D
- Genes
- Gender, hormones and ageing
- Medical diseases and medications
- Life stresses/depression
- Physical activity/weight bearing exercises
- Diet/Weight
- Smoking
- Vitamin K2

Nowson et al Brit J Nutr 2009; 106:online

# Osteoarthritis (OA) Chondroitin



## Canadian Study

194 people with knee OA  
2 year follow-up  
chondroitin vs celecoxib



## Results

- Chondroitin better reduction of cartilage loss in knee

American College of Rheumatology (ACR). "Chondroitin outperforms celecoxib in knee osteoarthritis study." ScienceDaily. 7 Nov 2015.

## Chondroitin

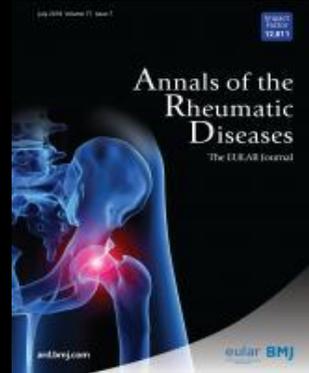


### Study

- 800mg/day Chondroitin
- Celecoxib 200mg/day
- Placebo

### Results

- Chondroitin better than Celecoxib



Reginster J-Y, et al. Ann Rheum Dis 2017; 0 :1-7. doi:10.1136/annrheumdis-2016-21086

## Chondroitin



Australian Doctor - 25 May 2017

***“Chondroitin sulfate beats placebo,  
but is it clinically meaningful?”***

Reginster J-Y, et al. Ann Rheum Dis 2017; 0 :1-7. doi:10.1136/annrheumdis-2016-21086

# Hypertension



## Hypertension Treatment

40% adults worldwide have Hypertension  
- 9.4 million deaths per year

### Who should be treated?

- Blood pressure above 90/150
- Over-treatment can be dangerous



Martin SA et al BMJ 2014;349:g5432

## Kyolic Garlic



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### NIIM Research

#### Treatment Benefits

- Blood Pressure control – better than BP Drugs
- Blood Vessel health – improved
- Microbiome – improvement

#### Other Research

- Decalcification of Coronary Arteries

Ried K, Travica N, Sali A. *Frontiers in Nutrition* 2018,  
Ried K, Travica N, Sali A. *Integrated Blood Pressure Control* 2016;9:9.



## Hypertension

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### Integrative approach

- Lifestyle/Diet
- Kyolic Garlic
- Beetroot Juice
- Magnesium
- Probiotics
- Other

# Heart Health



## CVD & VIT D

### Low Vitamin D



Several studies show

- increased coronary artery disease
- Stroke / Kidney failure

Reid IR, et al Heart 2012 Apr;98(8):609-14.

## Olive Oil – CVD

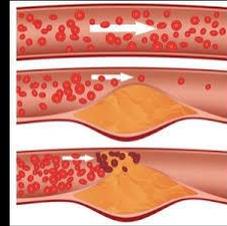


### Blood Lipids

Systematic review - 27 RCT

Diets

- With olive oil (10gm/daily)
- Other oils



### Results

Olive Oil group

- Increased HDL
- Decreased total cholesterol, LDL and triglycerides

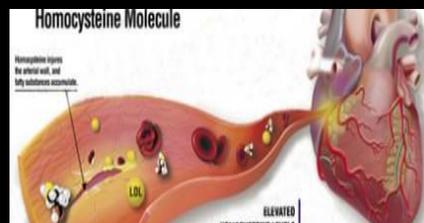
Ghobadi,S.et al., Crit Rev Food Sci Nutr, 2018; p. 1-15

## Homocysteine



### Increases

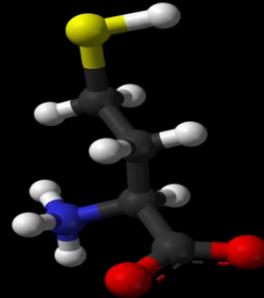
- CV disease
- Genetic abnormalities
- Parkinson's disease
- Alzheimer's disease
- Mood
- Cognition
- Osteoporosis



## Homocysteine Treatment



- Stress Reduction
- Diet
- Exercise
- Folic Acid
- Vitamin B6
- Vitamin B12
- Other



## Ageing – Cognitive Decline, Dementia, Alzheimer's Disease



## Cognitive Decline



### Risk Factors

- Loneliness
- Stress
- Diet/Weight
- Exercise
- Vitamin D
- Homocysteine
- Toxicity
- Decreased Lithium
- Other



## Dementia



### Central obesity

Longitudinal study – 36 years  
6,583 individuals



- Most abdominal fat - ↑ dementia
- 75% increase - ↑ highest weight

Whitmer R et al Neurology 2000 - online

## Alzheimer's Disease



### Olive Oil

Compound from extra virgin olive oil  
– oleocanthal

### Results

- Oleocanthal can protect against Alzheimer's Disease



Klein WL et al Toxicol & Appl Pharma 2009; Issue 2, Oct

## Multivitamins Cognitive & Cardiovascular Function



### Melbourne Study

160 Healthy Adults

Aged 50-70 years

Supplementation – Fish Oil (3gm & 6gm) +  
Multivitamin



### Results

- Fish Oil (6gm) decreased blood pressure
- Multivit + 3 & 6gm Fish Oil – improved memory

Pase, M, Sali A, Pipingas, A, et al, Jour Amer C Nut Volume 34, Issue 1, 2015

## Vitamin C & Cognition



### CHALICE STUDY – New Zealand

Cohort 404 – 50 year olds

Measuring cognitive health



### Results

- Higher Vit C concentrations =
  - better cognition
  - exhibited lower weight

Pearson JF et al, *Nutrients* 2017, 9(8), 831

## Vitamin C & Cognition



*(Concentrations of Vit C are higher in Brain than rest of body)*

### NIIM Study Melbourne

80 Adults - 24-96 y/old

- Cognitive assessments
- Vit C levels measured



### Results

- Higher Vitamin C = better cognition

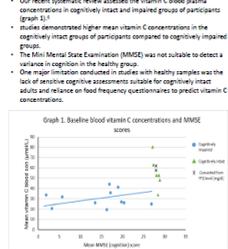
Vitamin C Concentrations and Cognitive Function: A Cross-sectional Study  
Nikolaj Travica<sup>1,2\*</sup>, Karin Ried<sup>2,3,4</sup>, Avni Sall<sup>2</sup>, Irene Hudson<sup>5,6</sup>, Andrew Scholey<sup>1</sup>, Andrew 1 Pipingas

# Plasma Vitamin C Concentrations and Cognitive Function: A Cross-Sectional Study

Authors: Nikolaj Travica, Karin Ried, Avni Sali, Andrew Scholey, Irene Hudson and Andrew Pipingas

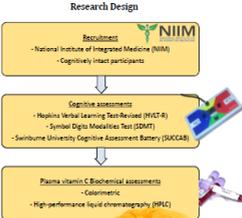
### Introduction

- Vitamin C concentrations are quite transient, with a number of factors affecting levels.
- Alcohol consumption, smoking and lack of fruit and vegetable consumption are factors. Additionally, trauma, surgery, infection, acute/chronic disease, pregnancy and old age (>65 yrs) promote the use of vitamin C and deplete concentrations.
- Symptoms that present during marginal vitamin C deficiency include fatigue, confusion, depression and apathy in wound healing.
- The biological roles of vitamin C in the brain have recently been described in more detail.
- Neurons are particularly concentrated in vitamin C but are also sensitive to vitamin C deficiency due to its utilization.
- The brain is capable of recycling vitamin C through glial cells called astrocytes.
- The most saturated vitamin C brain regions include the cerebral cortex, hippocampus and the amygdala.
- Studies have indicated that Vitamin C plays a role in neuroinflammation, redox imbalance, angiogenesis, neurodevelopment and neuronal energy support.



### Abstract

This poster depicts the results from a cross-sectional study that examined the association between plasma vitamin C concentrations and cognition. Although the neurological role has been well established the question remains as to whether these biological effects influence functional cognitive performance in a healthy sample. Previous studies demonstrated higher mean vitamin C concentrations in the cognitively intact group of participants compared to cognitively impaired groups. However, previous studies have failed to utilize suitable cognitive assessments for cognitively intact participants, and have relied on food frequency questionnaires to predict vitamin C concentrations. Due to these limitations, the present study was devised with the aim of exploring whether there is an association between plasma vitamin C concentrations and cognitive function in cognitively intact adults. To date, this is the first study to have done this with the utilization of suitable cognitive assessments such as the Swinburne University Cognitive Assessment Battery. This poster highlights the established neurological role of vitamin C, the methodology and results of the present cross-sectional study.



- A cross-sectional study design was followed, with participants attending one testing session.
- Primary measures included plasma vitamin C and cognition. Secondary measures included serum vitamin B12, mood, state of supplementation (smoking status, redox balance, weight, light, level of education, exercise (duration/type), family history of neurodegenerative disease).
- Cognition was assessed using two paper and pencil assessments and a computerized cognitive battery.
- Following cognitive assessments, blood was taken and plasma was analyzed using HPLC techniques and the colorimetric analysis (Lichrome or HPLC) and the HPLC analysis performed by a pathology company in Queensland. Cognitive function was analyzed between the two groups.

### Results

Table 1. Adequacy of defined analytical values for age groups

Plasma Vitamin C (µmol/L)	< 18	18-24	25-34	35-44	45-54	55-64	65-74	75-84	> 84
Mean (SD)	58.2 (15.9)	52.7 (15.2)	50.7 (15.1)	48.8 (14.8)	46.9 (14.5)	45.0 (14.2)	43.1 (13.9)	41.2 (13.6)	39.3 (13.3)
Median (IQR)	51.5 (38.5-65.5)	46.0 (33.0-60.0)	44.0 (31.0-58.0)	42.0 (29.0-56.0)	40.0 (27.0-54.0)	38.0 (25.0-52.0)	36.0 (23.0-50.0)	34.0 (21.0-48.0)	32.0 (19.0-46.0)

Table 2. Spearman correlation between MVLRT/SDMT and Plasma Concentrations

Measure	Sex	Age	Education	Weight	Light	Exercise	Family History	Redox	Mood	Vitamin B12
MVLRT	0.15	0.05	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SDMT	0.15	0.05	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05

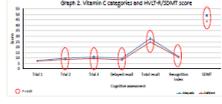
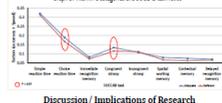


Table 3. Spearman correlation between SUCCAB test ratios and vitamin C concentrations

Measure	Sex	Age	Education	Weight	Light	Exercise	Family History	Redox	Mood	Vitamin B12
SUCCAB	0.15	0.05	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05



### Discussion/ Implications of Research

Results revealed that participants in the adequate vitamin C group were older in average and consisted of a majority of women, whereas those in the deficient group were mainly male (table 1).

A post-hoc correlation analysis revealed moderate strength, significant correlation between plasma vitamin C concentrations and scores on the MVLRT and the SDMT (table 2).

Additionally, a post-hoc correlation revealed moderate strength, significant correlation between vitamin C concentrations and congruent group and spatial working memory performance (table 3).

An analysis of outcomes revealed significantly higher scores on total brain derived neurotrophic factor (BDNF) in the adequate group on the MVLRT and SDMT (table 3).

Additionally, the SUCCAB revealed significantly higher performance on choice reaction time, inhibition speed and the congruent group inhibition cognition in the adequate group (table 3).

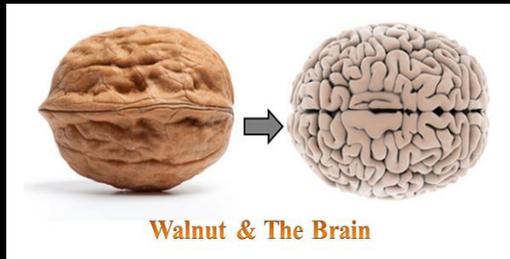
Higher cognitive function with concentrations (SUCCAB) is supported by the neurobiological mechanism of vitamin C in the central nervous system.<sup>1</sup>

Future research should investigate trials using vitamin C are warranted to determine causal relationship.

# Top Brain Foods

- Fish / Fish Oils
- Blueberries/Berries
- Nuts & Seeds
- Extra Virgin Olive Oil
- Turmeric
- Dark Chocolate
- D & B Vitamins





# Cancer

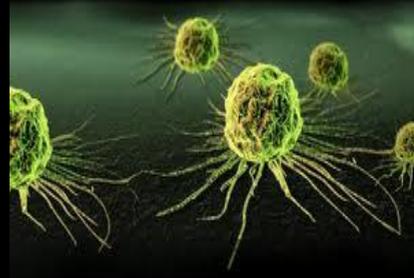


## Cancer Statistics



### Australia 2013

- 124,910 New Patients
- 1 in 2 Men
- 1 in 3 Women
- Leading cause of death (3 in 10 deaths)
- More than 60% survive over 5 years



Cancer Council Aust 2013

## Cancer Prevention



### World Cancer Research Fund Recommendations

- **Weight** – maintain healthy weight
- **Exercise** - 30 minutes daily
- **Food** - variety of plant foods
  - limit red meats, avoid processed meats
  - avoid sugary drinks
  - limit 'fast foods'; salty foods
- - limit alcohol – 2 for men, 1 for women
- **Breastfeed** babies where possible



WCRF US [www.wcrf.org](http://www.wcrf.org)

## Plants & Cancer

### Tumeric - Curcumin

- Most potent anti-inflammatory
- Can protect from cancer

### Green Tea – epigallocatechin gallate

- Anti cancer invasion, metastasis and angiogenesis

### Red Grapes – resveratrol / ellagic acid

- Inhibits cancer cells

### Cruciferous vegetables – sulforaphane

- Anti cancer



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Beliveau R A et al UICC World Cong 2012

## Soy

### Milk, Powder, Miso, Tofu etc.

### Prevents

- Breast Ca
- Prostate Ca
- Artery Disease



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# Bowel Cancer



## Diet & Bowel Cancer

### Influence of Diet on Recurrence

- Prospective Study
- 1009 patients (Stage III)
- Median follow up 5.3 years



### Results

- Higher intake of western dietary pattern associated with higher risk of recurrence and mortality

Meyerhardt J A et al JAMA 2007; 298: 754

## Bowel Cancer - Recurrence



### US Study

1,659 bowel cancer patients

Fish oil supplements or fish intake

### Results

- Fish/oils - reduce recurrence by 41%



*Gut* doi:10.1136/gutjnl-2016-311990



# Breast Cancer



## Breast Cancer & Stress



### USA Study

1,000 breast cancer patients  
Measured psychosocial stress

### Results

- Those with greater levels of stress –  
more aggressive cancers



Rauscher GH, et al 4<sup>th</sup> Amer Assoc Canc Research Conf 2011; Sept

## Breast Cancer & Meat



### Meat Consumption

UK Women's Cohort Study

- 35,372 Women

### Results

- Red meat and processed meat associated  
with breast cancer



Taylor E F et al Epidemiology 2007; 96:1139-

## Breast Cancer



### Protective Diets

- Fish
- Fruit
- Vegetables (Dark Green, Leafy)
- Whole grains, beans, legumes
- Soy Products



Rakel D Integrative Med. 2007

## Breast Cancer –Vitamin D



### Higher Vitamin D

Childhood and adolescence

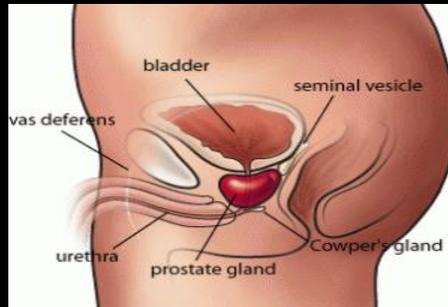
- Less breast cancer later
- Increases survival and remission

Blackmore KM et al, Am J Epid 2008;168:915

Mian Li, et al J of Clin Endocrinol & Metab, 2014; jc.2013-4320



# Prostate BPH/Cancer



## Prostate Disease

### Benign Prostatic Hyperplasia (BPH) Treatment

- Lifestyle changes  
(exercise, diet, weight loss)
- Supplements
- Drugs
- Surgery
- Other



## Prostate Disease

### BPH Treatment

#### Herbal Therapies

- Saw Palmetto
- Beta Sitosterol
- Stinging Nettle
- Epilobium
- Pygeum
- Other



Berges RR et al. *Lancet* 1995; 345(8964): 1529-32.

## Prostate Cancer

### Prevention/Treatment

- Soy (tofu, powder, milk, miso, tempeh)
- Pomegranate
- Flaxseeds
- Curcumin (Turmeric, Ginger)
- Selenium (Brazil Nuts, Mushrooms)
- Vitamin E (natural)
- Tomato/Lycopene



# Prostate Cancer



## Lifestyle changes

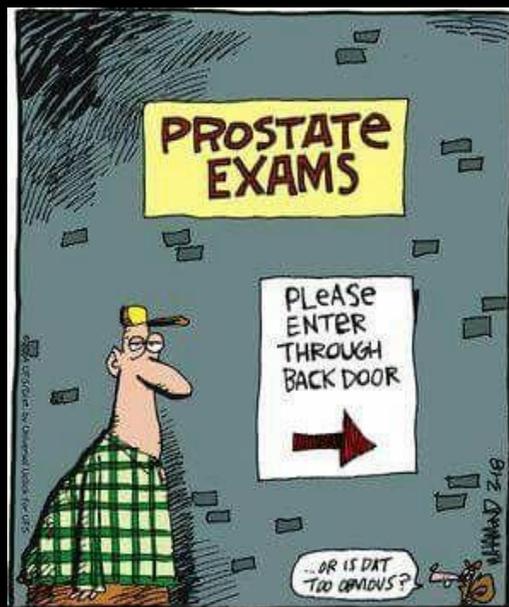
### One year study

- Stress reduction
- Relaxation techniques
- Exercise
- Healthy diet
- Supplements

Stops cancer progression



Ornish D et al J Urol 2005; 174:1065-



# NIIM Unique Cancer Treatments



## NIIM Unique Cancer Treatments

- Hyperthermia
- Circulating Tumour Cells (CTC)
- Intravenous Therapies
- Live Blood Analysis
- Photodynamic Therapy (PDT)
- Hyperbaric Therapy
- Other

*Hyperthermia - Morestep*



Hyperthermia & Cancer

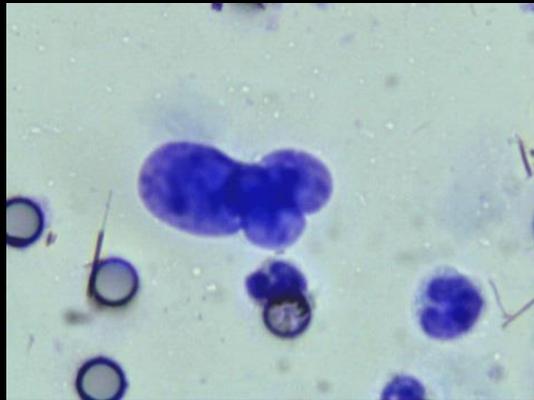


Tumour	Treatment	Effect with HT	Effect without HT
Melanoma	RT+/-LHT	62%	35%
Breast	RT+/-LHT	59%	41%
Cervix	RT+/-LHT	83%	57%
Bladder	RT+/-LHT pre-op	94%	67%
Oesophagus	RT+/-LHT	42%	24%
Soft tissue sarcoma	CT+/-LHT	28.7%	12.6%
Oesophagus	RT+CT+/-LHT pre-op	70%	8%



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# Circulating Tumour Cells -CTCs-



## Intravenous Vitamin C as Cancer Therapy



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Laboratory (in vitro)

- High concentration Vit C destroys cancer cells

**High dose IVC**

Human Research Studies

- can destroy cancer cells

Padayatty SJ et al (Levine M) CMAJ 2006;174:937

Drisko J et al, J Am Col Nutr 2003;22:118-



# High Dose Intravenous Vitamin C



## Effect on

- Inflammation & Cancer
- 45 Patients – various cancers  
IV Vitamin C (7.5 – 50g)

## Results

Inflammation response

- IVC 75%
- Control 25%

Cancer markers

- Correlated with inflammation response



Casciaro J A et al, Jour Trans Med 2012, 10 On-line

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## Hyperbaric (Perry Sigma36)



# Cocoa / Dark Chocolate



## Cocoa / Dark Chocolate

### Dark Chocolate

Cocoa 80%+ best

Consumed daily

- Males - up to 50gms
- Females – up to 35gms

Cocoa Powder, plus honey and milk, plus yoghurt

Best with handful of nuts



## Cocoa / Dark Chocolate



### Actions

- Anti-aging
- Anti-depressant
- Relaxing
- Aids Cognition
- Normalises blood stickiness
- Reduces cholesterol
- Appetite suppressant
- Cancer prevention & treatment
- Prevents diabetes
- Cough suppressant
- Anti tooth decay
- Other



## Cocoa Mood, Cognitive & Cardiovascular Health



### Melbourne Study

40 people, average age 24 years

Effects of 250mg Cocoa daily

Measured mood, fatigue, cognition & CVD health

### Results

Improved

- mental fatigue
- cognition



Massee L, Ried K, Travica N, Sali A, Pipingas A, et al Front. Pharmacol., 20 May 2015

## World's Oldest Person



### Jeanne Calmert

- Lived to 122 + 164 days
- French
- Took up fencing at 85
- Smoked until 95
- Rode bicycle at 110
- Made rap CD at 121



### Jeanne Calmert

#### Diet

- Vegetarian
- Olive Oil
- Chocolate  
(2 lbs/week)



## Chocolate & Nobel Prizes

### A survey of Noble Prize Winners

In general the more chocolate that is consumed in a country – the more Nobel Prize winners the nation produces



,NEJ Med 20/12 online Dr F Messerli

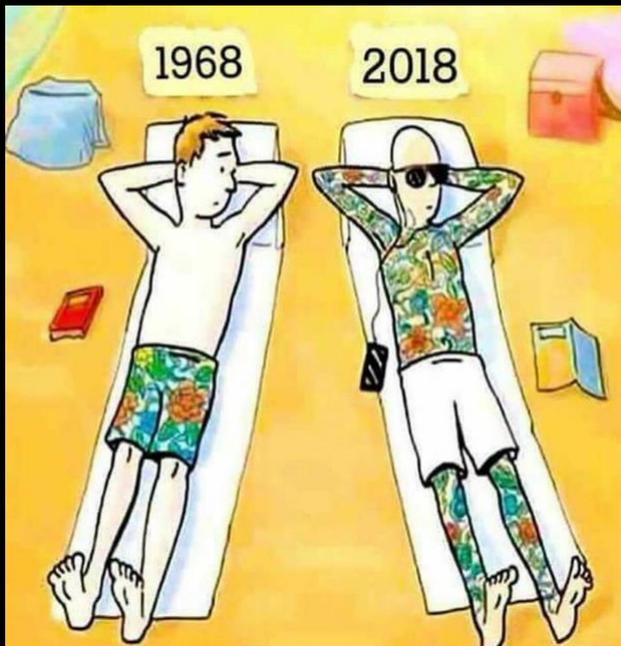
# Vitamin D



## Vitamin D



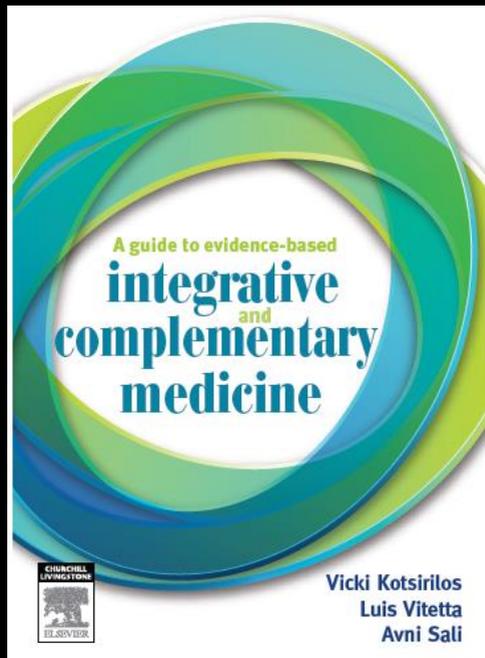
- Commonest nutritional deficiency in Australia
- Important factor in most common chronic diseases





# Happy Page

- Sunlight → Serotonin ↑ + Vitamin D ↑
- Exercise/Walk
- Fish Daily
- Dark chocolate – Cocoa
- Adequate Sleep
- Reduce Stress & Unloading







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PUBLIC  
ACCOUNTANTS\*

**HEAD OFFICE**

Level 6, 555 Lonsdale Street  
Melbourne VIC 3000 Australia  
T +61 3 8665 3100  
F +61 3 8665 3130  
E [headoffice@publicaccountants.org.au](mailto:headoffice@publicaccountants.org.au)  
[PUBLICACCOUNTANTS.ORG.AU](http://PUBLICACCOUNTANTS.ORG.AU)

**VICTORIA DIVISION**

Level 6, 555 Lonsdale Street  
Melbourne VIC 3000 Australia  
T +61 3 8665 3150  
F +61 3 8665 3151  
E [vicdivn@publicaccountants.org.au](mailto:vicdivn@publicaccountants.org.au)  
[PUBLICACCOUNTANTS.ORG.AU](http://PUBLICACCOUNTANTS.ORG.AU)