ROAD SHOW 2019

Presenters:

Dr. Yashwant P. Shukla, Psychiatrist
Lancaster & Morecambe Memory Clinic,
Lancashire Care NHS Foundation Trust

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Faculty of Health & Medicine, Lancaster University

Design, Research and Community Engagement

the dementia pioneers

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Dementia Beat Camp

Dementia Beat Camp The ABC's of Prevention

Centre for Ageing Research | Lancaster University

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@Garuth_Chalfont

The Dementia Pioneers is a group of like-minded local people who are interested in making the non-drug approaches more widely recognised and understood. The group plays an important role in helping to move forward a research agenda at Lancaster University, Faculty of Health and Medicine which aims to make multimodal dementia treatments available within the NHS.

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NHS

JSA Psychotherapy

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Hindu Society Lancaster & Morecambe

A healthy brain needs a holistic approach:
Non-drug Treatments to Intervene and Prevent Dementia

Outline

1. NHS Memory Assessment
2. Root causes of dementia
3. Reversing cognitive decline
4. Multimodal interventions
5. RAD-ISH
   (Research Addressing Dementia – Interventions Supporting Health)
6. Resources

DISCLAIMER: This presentation is not a substitute for medical advice. You are advised to consult your healthcare practitioner before adopting any of these research findings into your daily life.

Healthy and Unhealthy Brain

Figure 2. The brain is composed of three parts: the brainstem, cerebellum, and cerebrum. The cerebrum is divided into four lobes: frontal, parietal, temporal, and occipital.

The table lists the lobes of the brain and their normal functions as well as problems that may occur when injured. While an injury may occur in a specific area, it is important to understand that the brain functions as a whole by interrelating its component parts.

	Healthy Brain	Injured Brain
Frontal lobe	Personality / emotions Intelligence Attention / concentration Judgment Body movement Problem solving Speech (speak & write)	Loss of movement (paralysis) Repetition of a single thought Unable to focus on a task Mood swings, irritability, impulsiveness Changes in social behavior and personality Difficulty with problem solving Difficulty with language; can't get the words out (aphasia)
Parietal lobe	Sense of touch, pain and temperature Distinguishing size, shape and color Spatial perception Visual perception	Difficulty distinguishing left from right Lack of awareness or neglect of certain body parts Difficulties with eye-hand coordination Problems with reading, writing, naming Difficulty with mathematics
Occipital lobe	Vision	Defects in vision or blind spots Blurred vision Visual illusions / hallucinations Difficulty reading and writing
Temporal lobe	Speech (understanding language) Memory Hearing Sequencing Organization	Difficulty understanding language and speaking (aphasia) Difficulty recognizing faces Difficulty identifying / naming objects Problems with short- and long-term memory Changes in sexual behavior Increased aggressive behavior
Cerebellum	Balance Coordination	Difficulty coordinating fine movements Difficulty walking Tremors Dizziness (vertigo) Slurred speech
Brainstem	Breathing Heart rate Alertness / consciousness	Changes in breathing Difficulty swallowing food and water Problems with balance and movement Dizziness and nausea (vertigo)

Assessment process at the Memory Service

1. Information from GP
2. Medical history, including psychiatric or physical illness and depression
3. Recent blood tests –
   FBC, Serum B12 & Folate, Vit D, LFT (liver function), TFT (thyroid function), U & E [Urea & Electrolyte], Lipids – (Blood Cholesterol, HDL, LDL and Triglycerides), HbA1C, Blood glucose, CRP and ESR
4. MSU - Mid-Stream Urine test
5. List of medications
6. Scans – CT, EEG, ECG
7. Memory Tests:
   A. MOCA
   B. ACE III
   C. Mini ACE

Memory Service Management of Dementia

1. Memory medications
   - (AChEIs – acetylcholinesterase inhibitors)
2. Non-drug treatments
3. Memory aids (Calendar, diary, sticky notes)
4. Healthy lifestyle (diet, exercise, body & mind)

5. Establish functional ability and risks
6. Capacity assessment, LPA, driving DVLA
7. Carer assessment, education
8. Social care needs and support
9. Future planning

NHS

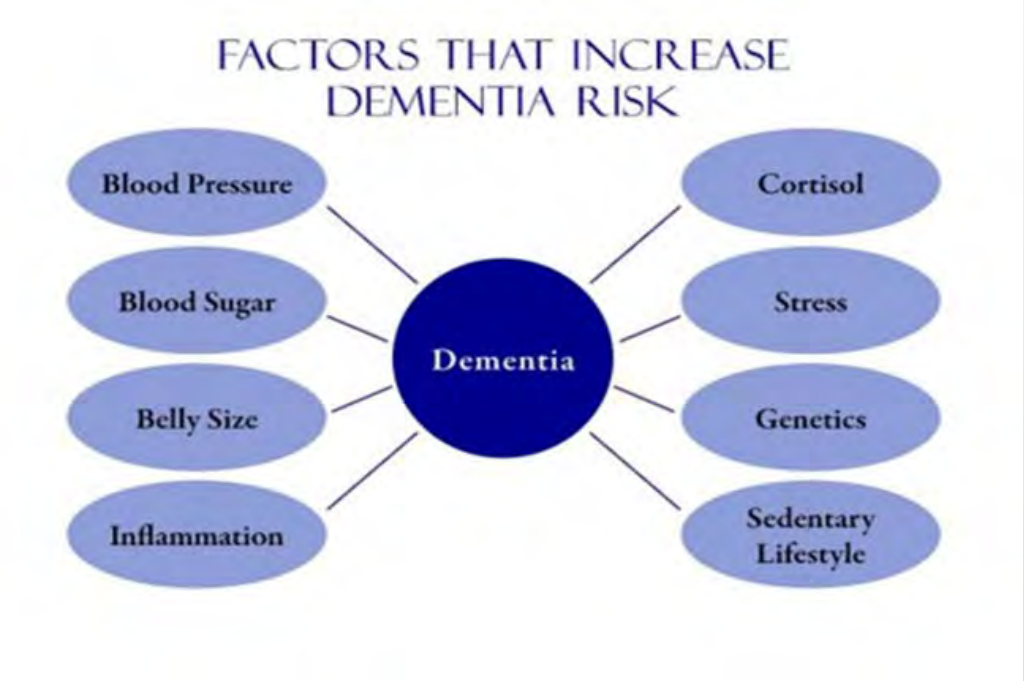
Medication that causes memory problems:

1. Over-the-counter medication starting with “anti-”

- Anti-Histamine
- Anti-Spasmodic
- Anti-Depressants
- Anti-Psychotics
- Anti-Parkinson’s drugs
- Anti-Epileptic
- Antacids

2. Other medications:

- Nytol
- Gaviscon
- Statins
- Steroids
- Pregabalin



Root Causes of Dementia

Non-drug Treatments to Intervene and Prevent Dementia

https://youtu.be/gRLef9KkJAA

"You don't get dementia…"

Reversal of Cognitive Decline: A novel therapeutic program

USA

Dale E. Bredesen - Aging, Sept. 2014, Vol 6 No 9

36 Metabolic Factors

INTERVENTION

- Comprehensive, personalized program to enhance the metabolism with multiple modalities to achieve Metabolic Enhancement for Neurodegeneration (MEND)

- Patients had memory loss associated with AD or cognitive impairment

Non-drug Treatments to Intervene and Prevent Dementia

Goal
⇓ Aβ production (net)
⇑Aβ degradation
⇓ Aβ oligomer-ization
⇑BDNF
⇑NGF
⇑G-CSF
⇑ADNP
⇓p-tau
⇓homocysteine
Build synapses
⇓4/2
⇑ Aβ breakdown
⇑A/G ratio
⇓inflammation
Inhibit NFkB
⇑GSH
⇑antioxidants
⇓Fe (⇓Cu ⇑Zn?) Target is Zn:fCu of 100:10-15

⇑antioxidants
⇓Fe (⇓Cu ⇑Zn?) Target is Zn:fCu of 100:10-15.
⇑CBF
⇑ACh
⇑α7 signaling
⇑ Aβ transport
⇑ Aβ clearance
⇓ApoE4 effect
⇑GABA
⇓NMDA
Optimize hormones
⇑vitamin D
⇓pro-NGF
⇓caspase-6
⇓N-APP
⇑memory
⇑Energy
⇑Mitochondrial function
⇑Mitochondrial protection

Why Memory Loss?

Example:

- **Patient with the initials K.U.**
- **65 years old**
- **ApoE4-positive**

Association	Yes/No
ApoE4? Heterozygote? Homozygote?	Yes (4/3)
Homocysteine >7?	Yes (15.1)
Vitamin B12 < 500?	Yes (328)
CRP > 1.0?	Yes (9.9)
A/G ratio < 1.8?	Yes (1.6)
HgbA1c > 5.6? Fasting insulin > 6 uIU? GTT insulin?	HgbA1c 5.5 Insulin 32
Simple CHO in diet?	Yes
FBS > 90?	Yes (96)
Thyroid: TSH > 2.0?	Yes (2.21)
Free T3 < 3.2? RT3 > 20?	Yes (2.4)
Free T4 < 1.3?	Yes (0.8)
Sleep apnea/hypopnea?	No
Low androgen? Total T < 500? Free T < 6.5?	Yes (264) Yes (41, 4.1)
Low estradiol? Post-menopausal? E2<100? E2:P >300? Hysterectomy at <41 y.o.?	NA
Low pregnenolone? <20?	Pd.
Vitamin D < 30?	Yes (21)
History of head trauma? LOC?	No
Diabetes?	No, but insulin resistant
Neuroactive medications? Which?	No
History of illicit drug use?	No
Metabolic syndrome?	Yes (TG, BP, glu, insulin)
Cholesterol > 225? < 150?	Yes
Abnormal HDL:LDL ratio?	Yes
Post-menopausal?	NA

Non-drug Treatments
to Intervene and Prevent Dementia

Reversal of Cognitive Decline in Alzheimer's disease

Dale E. Bredesen - *Aging*, June 2016, Vol 8 No 6

RESULTS

- 9 out of 10 patients improved beginning within 3 months
- 6 of the patients who had stopped working or were struggling at work have gone back to work or are continuing without difficulty

- Improvements have been sustained
- Longest follow-up is 2.5 years

Professor Dale Bredesen

"Here we report the results from quantitative MRI and neuropsychological testing in ten patients with cognitive decline, nine ApoE4+ (five homozygous and four heterozygous) and one ApoE4-, who were treated with the MEND protocol for 5-24 months. The magnitude of the improvement is unprecedented, providing additional objective evidence that this programmatic approach to cognitive decline is highly effective. These results have far-reaching implications for the treatment of Alzheimer's disease, MCI, and SCI; for personalized programs that may enhance pharmaceutical efficacy; and for personal identification of ApoE genotype."

Multimodal Intervention

Non-drug Treatments to Intervene and Prevent Dementia

Social Interaction

Reducing stress and blood pressure

Singing, Music and Dancing

Brain Training
Sleep Hygiene
Fasting

DIET – Broccolli, Spinach, Beetroot, Berries, Green Tea, Cocoa, Coffee, Salmon, Red Wine…

Antioxidants, Vitamins D, B6, B12, Folic Acid, Quit smoking

Walking, Aerobic Exercise, Gardening, Resistance Training

Genetics…
load the gun, but lifestyle pulls the trigger

Physical Activity and Exercise

Lowers blood pressure; pumps oxygen and nutrients to the brain; improves sleep, mood, memory, appetite, strength and balance; combats frailty, cardiovascular disease; delays onset.

See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

Active Mind, Body & Soul

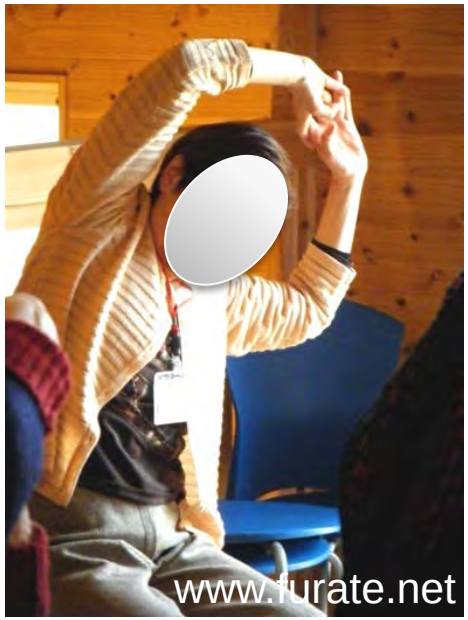
Enjoyable activities outside prevent loneliness and depression which can both lead to dementia.

Non-drug Treatments to Intervene and Prevent Dementia

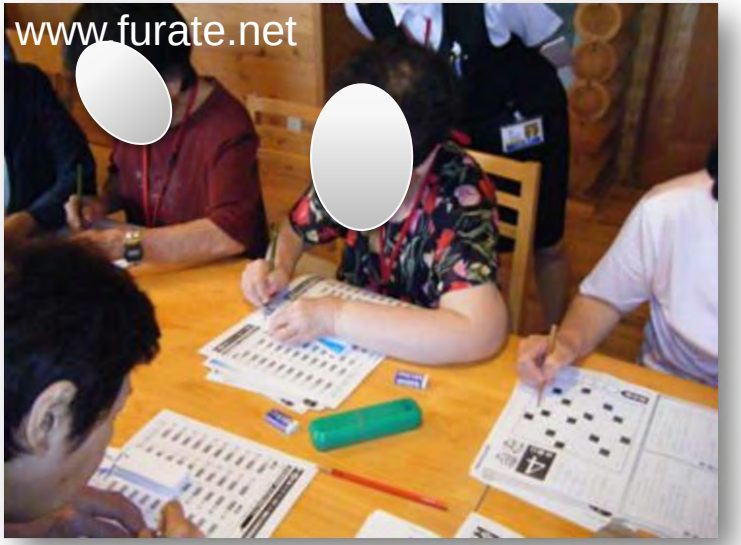
Dementia Prevention Class

Kenshi Nishino HTR MD PhD

Nishino Hospital, Japan



Aerobic exercise, card games, cooking, outdoors activity and diary: stress relief, making a product, enjoyment, delight, expectation, following a plan and having an achievement.



www.furate.net

American Horticultural Therapy Association®

Nishino Hospital, Kitakyushu, Japan

Planting seedlings

See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

Non-drug Treatments to Intervene and Prevent Dementia

Article

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SAGE

Exposure to nature gardens has time-dependent associations with mood improvements for people with mid- and late-stage dementia: Innovative practice

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Lancaster University, Lancaster, UK

J Martin Bland
Department of Health Sciences, University of York, York, UK

Christopher Neale
Environment Department, University of York, York, UK

Dominic Trepel and Hilary Graham
Department of Health Sciences, University of York, York, UK

Abstract
Exposure to green space and nature has a potential role to play in the care of people with dementia, with possible benefits including improved mood and slower disease progression. In this observational study at a dementia care facility in the UK, we used carer-assessed measures to evaluate change in mood of residents with mid- to late-stage dementia following exposure to a nature garden. We found that exposure to nature was associated with a beneficial change in patient mood. There was a non-linear relationship between time spent outdoors and mood outcome. Improvements in patient mood were associated with relatively short duration

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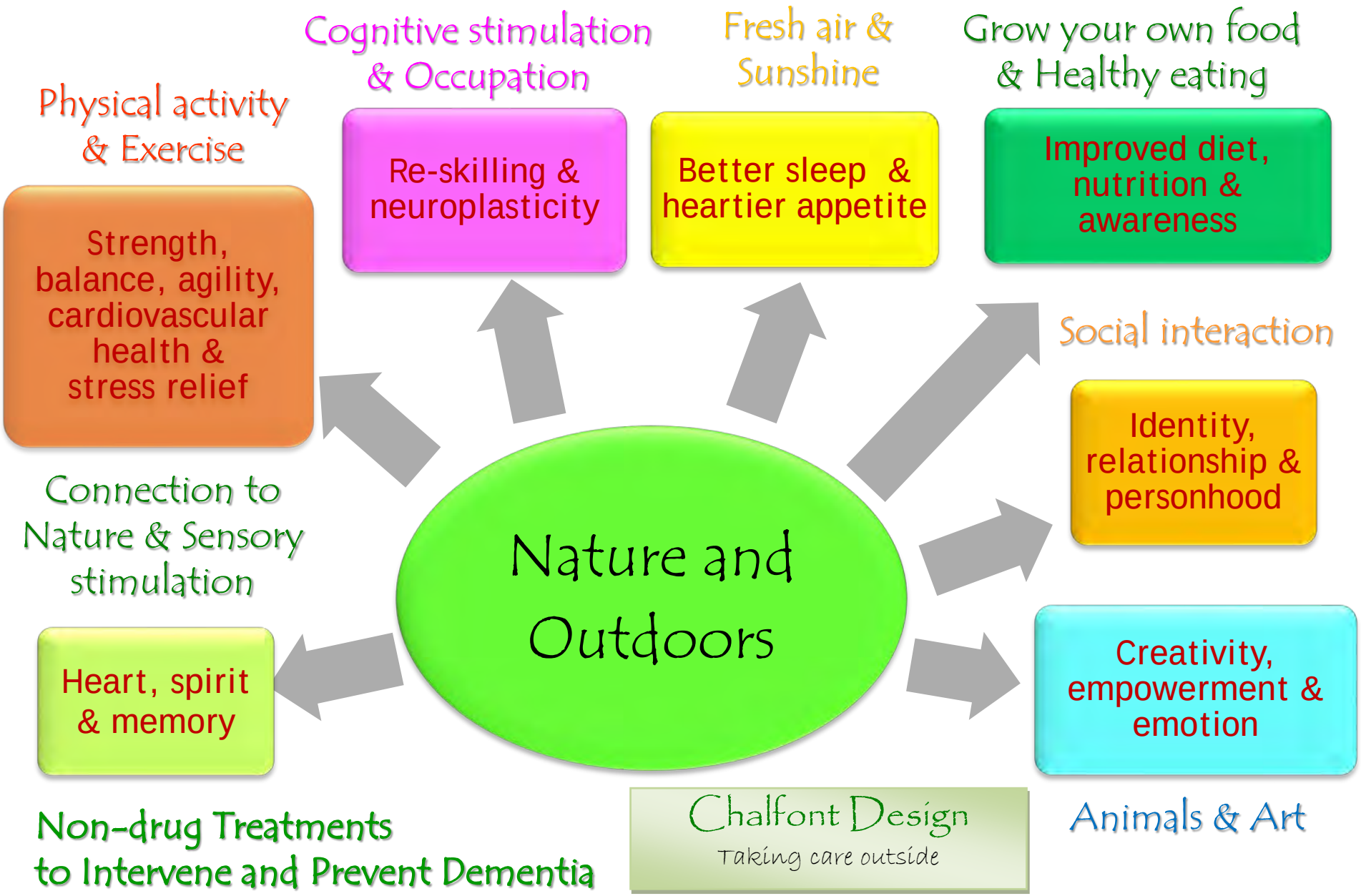
Non-drug Treatments to Intervene and Prevent Dementia

The Natural World for Dementia Prevention



Non-drug Treatments to Intervene and Prevent Dementia

Diet

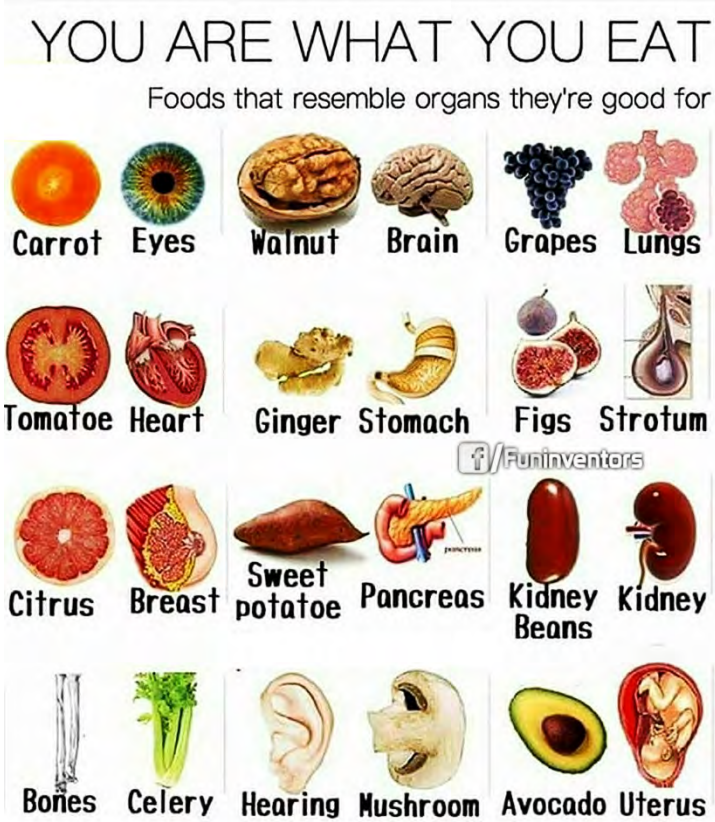
Good for brain health

Non-drug Treatments to Intervene and Prevent Dementia

EVERY 35 DAYS, YOUR SKIN REPLACES ITSELF,
EVERY MONTH, YOUR LIVER REPLACES ITSELF,
YOUR BODY MAKES THESE NEW CELLS
FROM THE FOOD YOU EAT.
WHAT YOU EAT, LITERALLY *BECOMES YOU.*
YOU HAVE A CHOICE IN WHAT YOU'RE MADE OF,
YOU ARE WHAT YOU EAT

Dark leafy greens & Colourful vegetables

Only *dark* chocolate



Polyphenol antioxidants such as resveratrol reduce your risk for AD

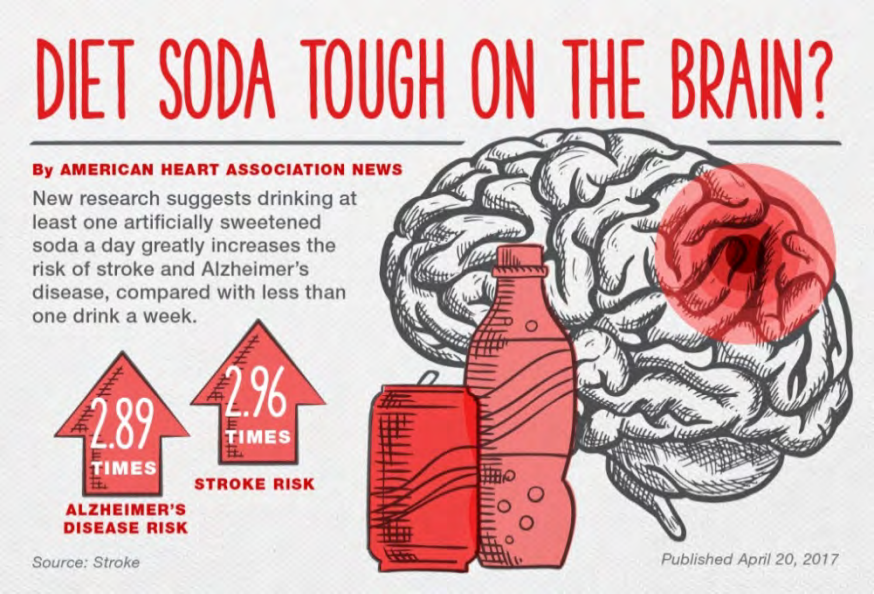
Non-drug Treatments to Intervene and Prevent Dementia

See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

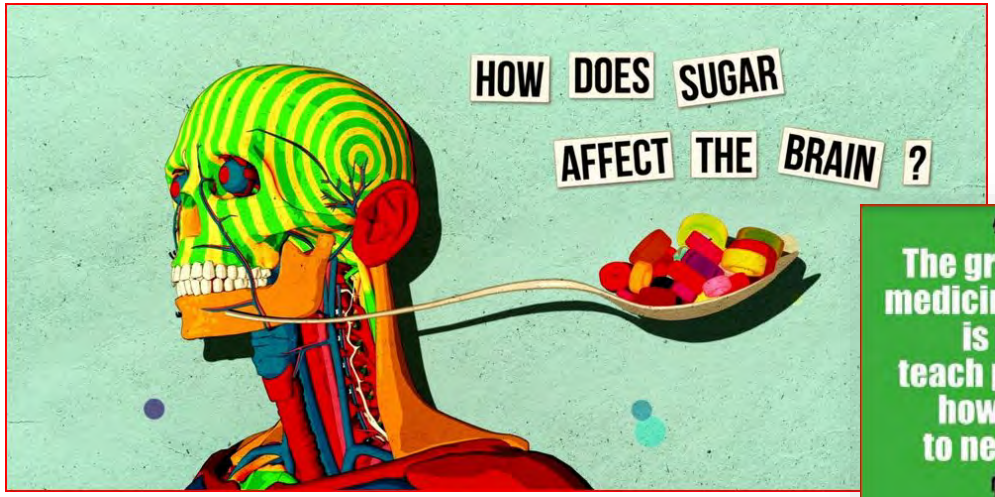
Avoid processed food, sodas and 'diet' drinks

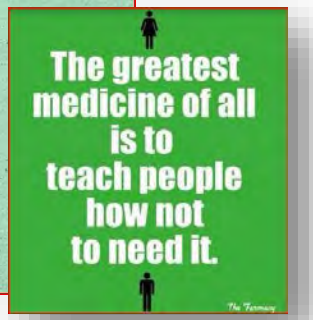
* SUGAR
* Refined carbohydrates (white foods: flour, rice, pasta)
* Farm-raised fish and processed meats
* Trans fats (partially hydrogenated oils), margarine
* Mono-sodium Glutamate (MSG), other food additives and preservatives
* Highly processed vegetable and seed oils, such as canola, corn, sunflower, peanut, grapeseed, safflower oil
* Microwave popcorn
* Non-organic potatoes and other fresh produce known for high pesticide contamination

https://drjockers.com/causes-inflammation/



Limit simple carbohydrates and gluten.





Avoid SUGAR and Artificial Sweeteners

August 2013, *New England Journal of Medicine " even subtle elevations of* fasting blood sugar translates to dramatically increased risk for dementia."

Aspartame - by far the most dangerous substance added to most foods today.

See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

NUTRIENTS EXPLAINED

DIETARY ESSENTIALS from (https://en.wikipedia.org/wiki/Nutrient)

A. Types of MACROnutrients

1. The chemical elements humans consume in the largest quantities are carbon, hydrogen, nitrogen, oxygen, phosphorus, and sulphur, summarized as CHNOPS.
2. The chemical compounds that humans consume in the largest quantities and provide bulk energy are classified as carbohydrates, proteins, and fats. Water must be also consumed in large quantities.
3. Calcium, sodium, potassium, magnesium, and chloride ions, along with phosphorus and sulfur, are listed with macronutrients because they are required in large quantities

B. Types of MICROnutrients

1. Dietary minerals are generally trace elements, salts, or ions such as copper and iron. Some of these minerals are essential to human metabolism.
2. Vitamins are organic compounds essential to the body. They usually act as coenzymes or cofactors for various proteins in the body.

C. ESSENTIAL Nutrients - These are 9 amino acids, 2 fatty acids, 13 vitamins and 15 minerals.

1. An *Essential* AMINO acid is an amino acid that is required by an organism but cannot be synthesized *de novo* by it, and therefore must be supplied in its diet. Out of the twenty standard protein-producing amino acids, nine **(9)** cannot be endogenously synthesized by humans: phenylalanine, valine, threonine, tryptophan, methionine, leucine, isoleucine, lysine, and histidine

2. *Essential* FATTY acids (EFAs) **(2)** are fatty acids that humans and other animals must ingest because the body requires them for good health but cannot synthesize them.[16] Only two fatty acids are known to be essential for humans: alpha-linolenic acid (an omega-3 fatty acid) and linoleic acid (an omega-6 fatty acid)

3. VITAMINS **(13)** are organic molecules essential for an organism that are not classified as amino acids or fatty acids. They commonly function as enzymatic cofactors, metabolic regulators or antioxidants. Humans require thirteen vitamins in their diet, most of which are actually groups of related molecules (e.g. vitamin E includes tocopherols and tocotrienols):[18] vitamins A, C, D, E, K, thiamine (B_1), riboflavin (B_2), niacin (B_3), pantothenic acid (B_5), vitamin B_6 (e.g., pyridoxine), biotin (B_7), folate (B_9), and cobalamin(B_{12}). The requirement for vitamin D is conditional, as people who get sufficient exposure to ultraviolet light, either from the sun or an artificial source, synthesize vitamin D in the skin.

4. MINERALS **(16-18)** are the exogenous chemical elements indispensable for life. Although the four elements: carbon, hydrogen, oxygen, and nitrogen, are essential for life, plentiful in food and drink. Recommended intakes are only identified for the sulfur-containing amino acids methionine and cysteine.

The ESSENTIAL NUTRIENT ELEMENTS for humans, listed in order of Recommended Dietary Allowance (expressed as a mass),are potassium, chlorine, sodium, calcium, phosphorus, magnesium, iron, zinc, manganese, copper, iodine, chromium, molybdenum, selenium and cobalt (the last as a component of vitamin B_{12}). Other minerals essential for some plants and animals, but may or may not be essential for humans, such as boron and silicon.

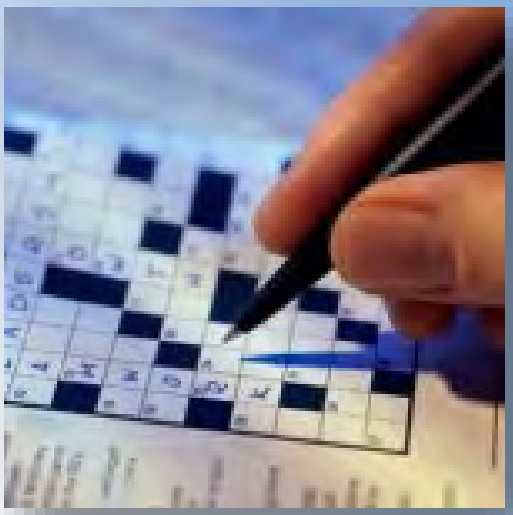
THIS and other HANDOUTS: www.chalfontdesign.com

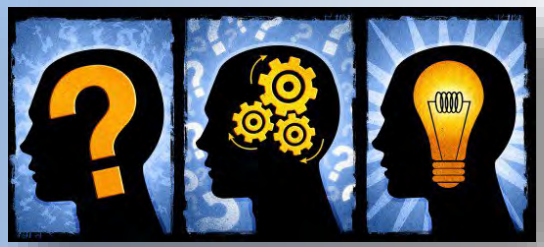
Dietary restriction (DR) or Calorie restriction (CR) alleviates many age-associated diseases including neurodegeneration and improves cognitive functions

- A robust mechanism that extends lifespan in various organisms
- Ameliorates brain aging by reducing oxidative stress
- Improves mitochondrial function
- Activates anti-inflammatory responses
- Promotes neurogenesis
- Increases synaptic plasticity
- Protects and prevents age-related structural changes
- Inhibits/activates nutrient signaling cascades such as insulin/IGF-1, mTOR, AMPK and sirtuins (Hadem et al 2019)

Cognitive Stimulation (brain training)

Improves memory and reasoning





Improves behaviour
Reduces depression

See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

Transcranial Magnetic Stimulation

Reports of therapeutic application of electricity sources to the scalp – including electric fish! – are at least 2000 years old.

Transcranial magnetic stimulation (TMS) is a non-invasive technique able to induce changes in brain activity and long-term modifications in impaired neural networks, becoming a promising clinical intervention.

Transcranial direct current stimulation (tDCS) applies low electrical current to the scalp to modulate cognitive, motor or sensory brain functions; simple, low-cost technology, easy to apply; has been suggested for cognitive enhancement as well as treatment for stroke, Parkinson's disease, Alzheimer's disease, epilepsy, schizophrenia, depression, autism, attention-deficit-hyperactivity disorder, and pain.

Photobiomodulation combines photonic and magnetic emissions, produces a neuroprotective effect against amyloid beta and shows therapeutic efficacy similar to other pharmacological approaches.

See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

Article

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A mixed methods systematic review of multimodal non-pharmacological interventions to improve cognition for people with dementia

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Abstract

Objective: Multimodal non-pharmacological interventions have been argued to have the potential to complement current pharmacological approaches to improving quality of life for people living with dementia. The aim of this review was to identify, synthesise and appraise the evidence for the effectiveness of multimodal non-pharmacological interventions for improving cognitive function specifically.

Method: After a comprehensive search strategy including grey literature, 26 studies were reviewed. The inclusion criteria concerned adults with a primary diagnosis of dementia. Studies used two or more different modes of intervention, and measured a cognitive outcome. Due to differences in the conceptualisations of the term 'multimodal', a typology of modes and methods was developed to facilitate classification of candidate studies.

Results: Twenty-one group studies and five case studies were found. Group studies used two or three modes of intervention and multiple methods to implement them. Interventions utilised were cognitive, physical, psychological and psychosocial, nutrition, fasting, gut health, sleep hygiene, stress reduction, detoxification, hormonal health and oxygen therapy. Five individual case studies were found in two separate papers. Each personalised patient treatment utilised in-depth assessments and prescribed up to nine different modes. In 19 (90%) of the 21 group comparisons, participants were reported to have cognitive improvements, stability with their

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Centre for Ageing Research Lancaster University

PO5.28. Multimodal Treatment for Dementia (MT4D) : a systematic review and case study in the UK. Garuth Chalfont, Christine Milligan & Jane Simpson - Lancaster University, UK

Scan code to read this paper

AIMS & OBJECTIVE

This review is designed to synthesise available evidence about the effectiveness of non-pharmacological multimodal interventions on the cognition of adults with dementia. ▶What works & what does not? ▶For different stages? ▶Strengths and limitations of different study designs? ▶Different modes of delivery?

In 9 out of 10 group studies, participants experienced cognitive improvements, stability with their dementia or a delay in their decline.

KEY FINDINGS

1. We found evidence that multimodal non-drug treatments can improve cognitive function in people with a diagnosis of dementia.
2. The treatments were often cognitive (plus physical, psychosocial or nutritional).
3. Participants were supported by caregivers, students or a social network.
4. A person's dementia did not limit their involvement.
5. Nutrition, fasting, oxygen therapy, stress reduction, sleep improvement and other modes addressed the underlying causes of dementia.





FUTURE DIRECTIONS

We hope this research will:

- Encourage people with dementia and their carers to explore such treatments
- Stimulate research that improves clinical understanding and patient outcomes

We have now designed a research study using an integrative or functional medicine approach to:

- Explore the root causes of a person's dementia
- Address the person's health holistically
- Support them to do new activities
- Engage the person with memory problems and their significant other

A programme of activities, instruction and support will be based in a garden setting.

LINK TO THE PAPER:
http://journals.sagepub.com/doi/pdf/10.1177/1471301218795289

Thanks to the AIM Foundation for funding this research.

Root Causes

Inflammation 'root of chronic health problems'

- Physical, emotional or chemical stress: low-grade, chronic, long lasting
- CAUSES: inflammatory diet, blood sugar imbalances, leaky gut syndrome, poor sleep habits, chronic stress, environmental toxins & chronic infections
- Excess of free radical oxidative stress, pro-inflammatory cytokines CONTRIBUTE TO: Poor memory, Alzheimer's, Parkinson's, MS, ALS, OCD, AND, Autism, Migraine, Insomnia, Depression, Dementia, Bi-Polar Disorder & Cancer
- REDUCE stress with healing diet, balancing blood sugar, grounding, deep breathing exercises, sunlight exposure, Epsom salt baths & dry brushing.
- SLEEP: time to flush out toxins including the toxic protein beta-amyloid; upregulates appropriate neurotransmitters and rebuilds myelin sheaths that protect and insulate nerve fibers. https://drjockers.com/causes-inflammation/

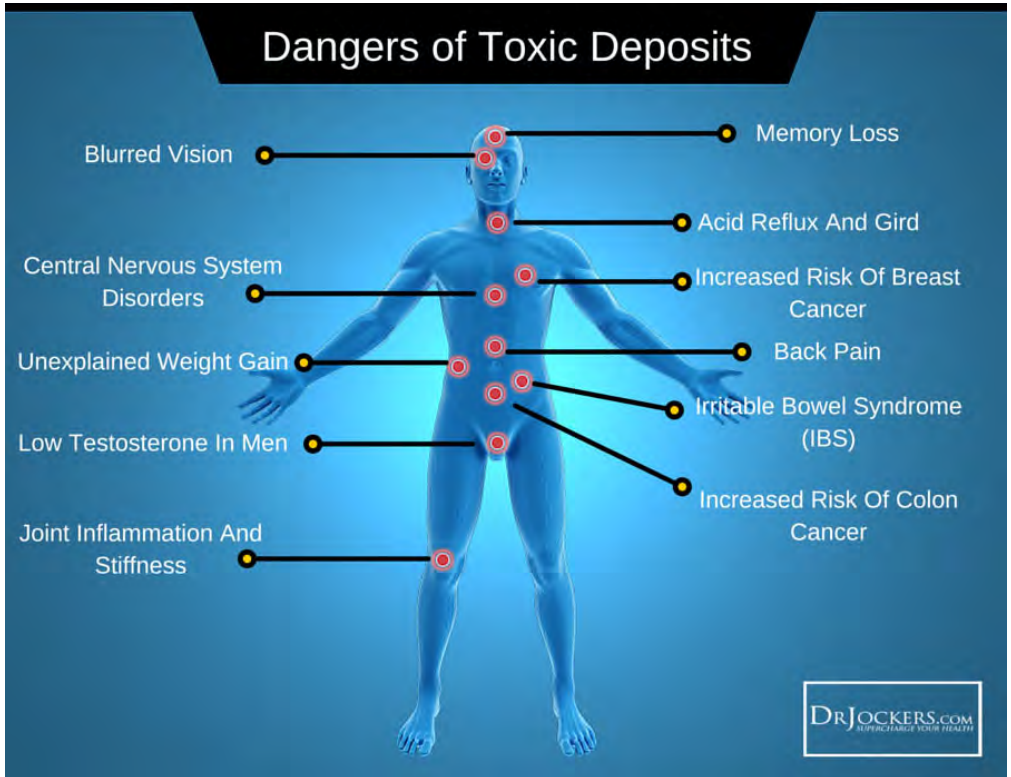
Infections

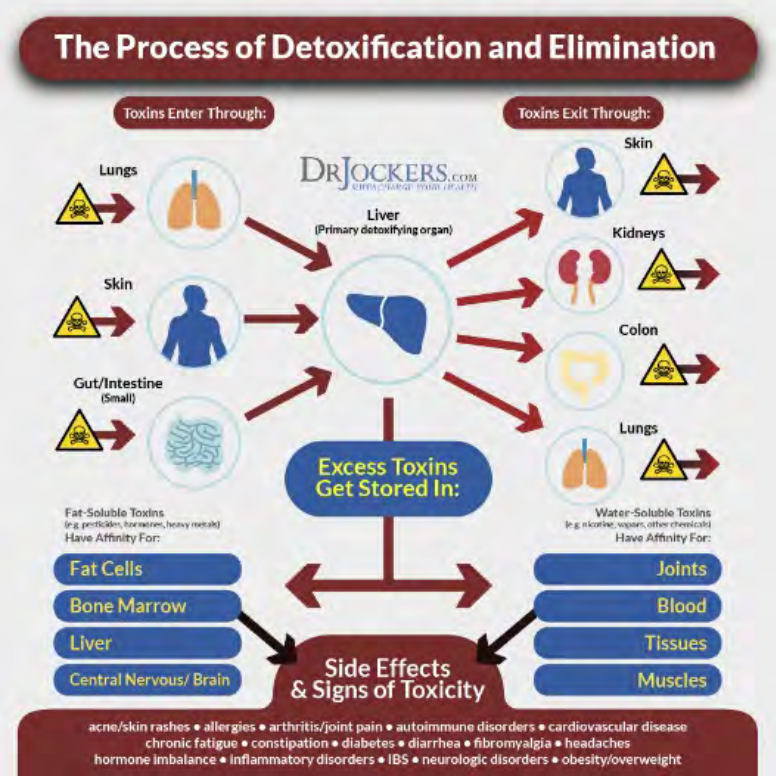
- Chronic infections result from a variety of pathogens such as bacteria, viruses, parasites, and fungi.
- Lyme, herpes, hepatitis, candida, Epstein-Barr virus, microbes, gingivalis (gum disease), UTI, bladder infections (amyloid plaque may be a protective response to microbial invaders) https://drjockers.com/causes-inflammation/

See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

Toxins (reference to www.DrJockers.com)

1. Chemicals – household cleaners, personal care products, medications, agriculture & horticulture, GMO, 'conventionally' (versus organically) grown foods, hormones, antibiotics, pesticides, industrial chemicals, smog, smoke, flouride (unfiltered tap water, toothpaste); 85,000 industrial chemicals
2. Mold – black mold on walls inside buildings is a neurotoxin
3. EMF – wifi, radio waves, wireless technology, high-frequency, radiation, 5G REMOVE with anti-inflammatory diet, hydration, exercise, intermittent fasting, juicing greens, infrared sauna, essential oils, oil pulling.



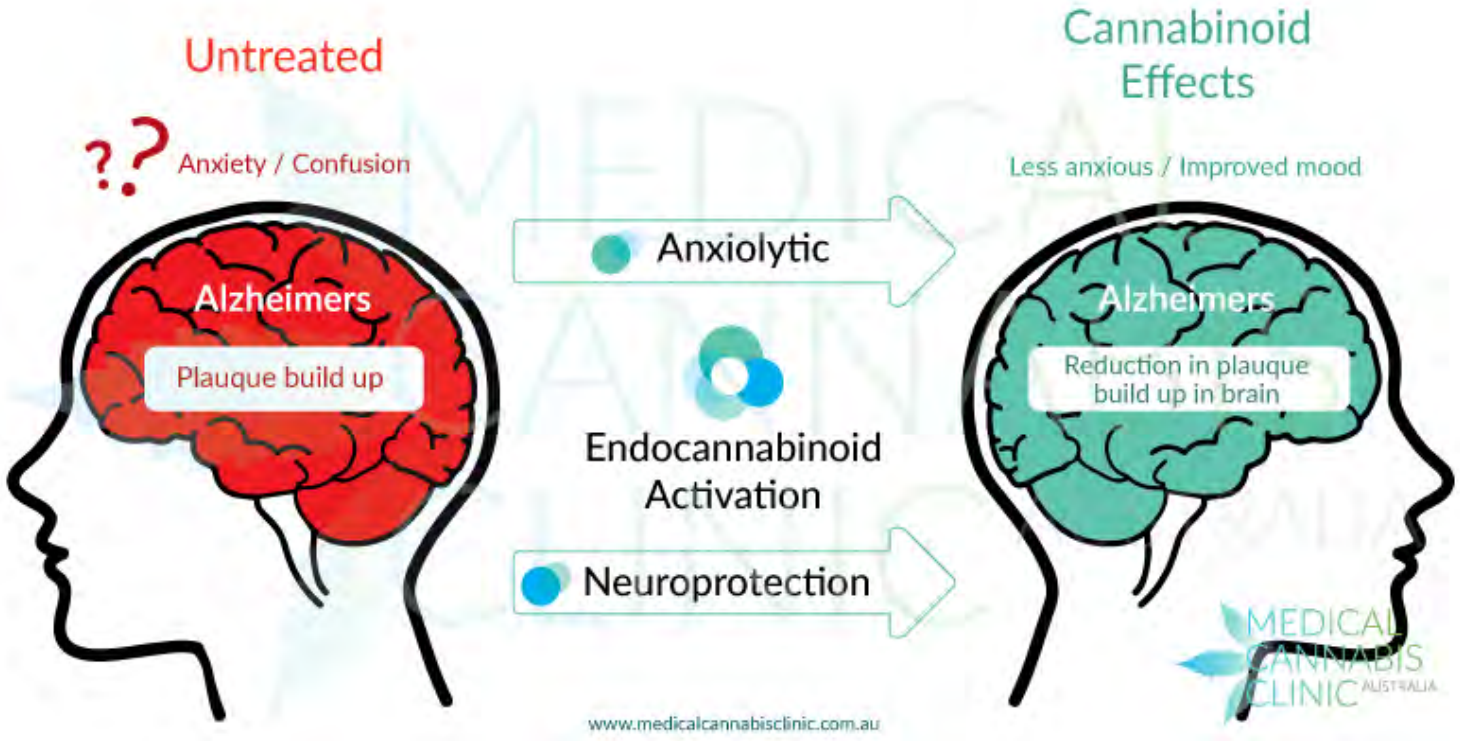


Toxins

4. Heavy metals – mercury (dental amalgams, vaccines), aluminium (deodorant), arsenic, lead…

Medical Cannabis (*Cannabis sativa*)

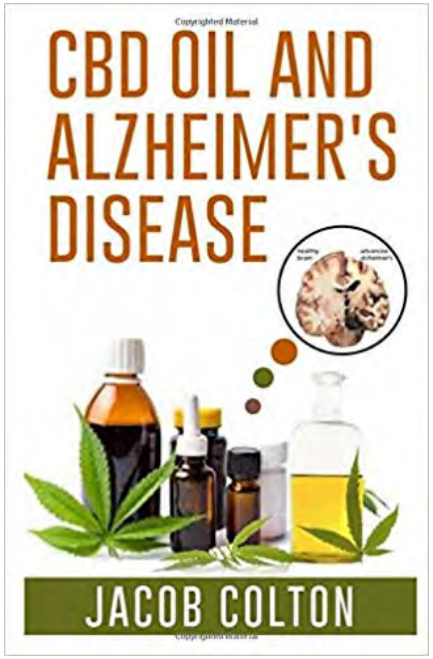
Your body actually makes its own cannabinoids, similar to those found in marijuana, albeit in much smaller quantities than you get from the plant. The fact that your body is replete with cannabinoid receptors, key to so many biological functions, is why it has such enormous medical potential.

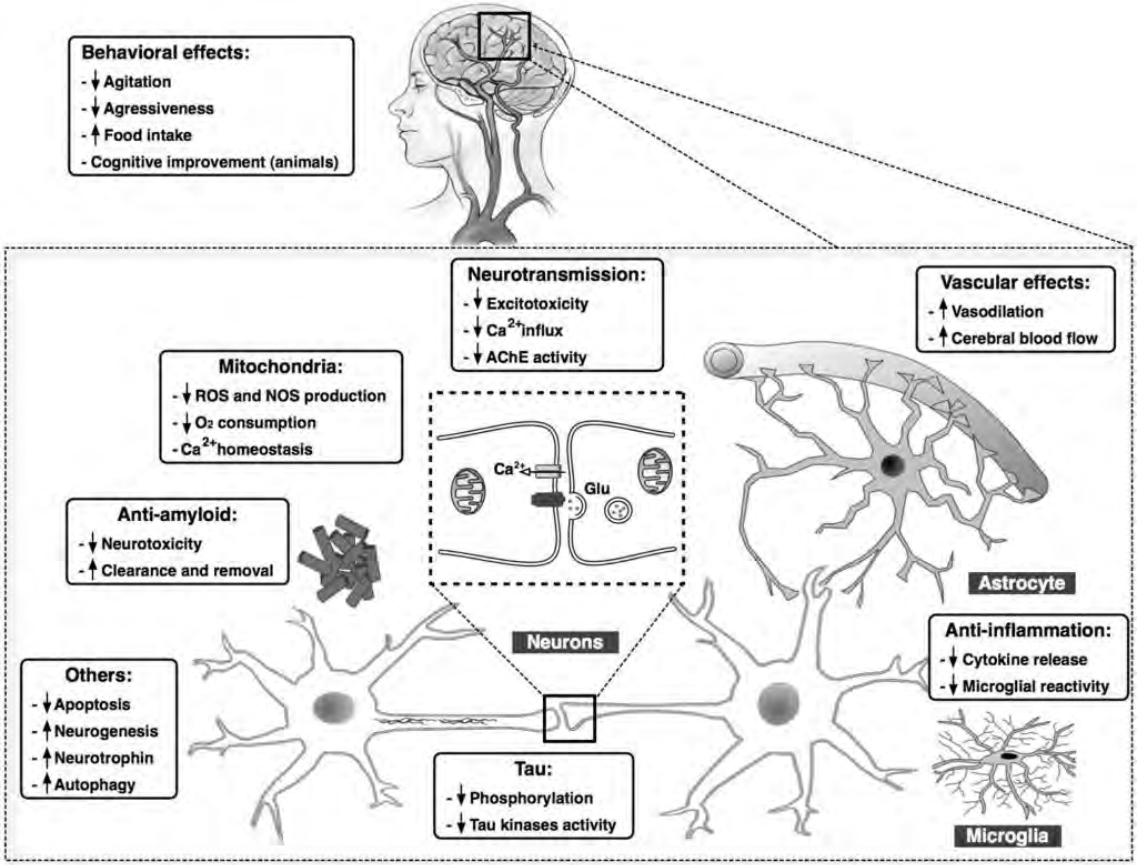


Natural, non-addictive solution to pain with no harmful side effects; activates our endocannabinoid system; used for a wide range of conditions, including neurodegenerative disorders.

Medical Cannabis (*Cannabis sativa*)

https://www.sciencedaily.com/releases/2016/06/160629095609.htm (Currais 2016)
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3942876/ (Aso & Ferrer 2014)
http://www.nature.com/articles/npjamd201612
https://www.alzheimers.net/6-15-15-effects-of-medical-marijuana-on-alzheimers/ Mixed results in two studies with people with dementia - one in the Netherlands showing no effect on dementia symptoms and the other in Tel-Aviv showed it to be a safe and promising treatment option.
http://articles.mercola.com/sites/articles/archive/2017/05/25/cannabis-help-aging-brain-dementia.aspx Used for pain, sleep problems, dystonia, MS, Parkinson's, mood disorders, anxiety, PTSD and nightmares. It is safer than drugs, especially opioids!





Non-drug Treatments to Intervene and Prevent Dementia

DEMENTIA PREVENTION THROUGH HOLISTIC LIVING WORKING IN PARTNERSHIP WITH Chalfont Design

Taking care outside

DRAW FROM THE EVIDENCE

IMPROVE DIET & NUTRITION

Eat more Herbs & Spices, Good Fats & Omega 3's. Fast Regularly. Drink More Water.

Antioxidants, Nutrients, Healthy Gut & Less Inflammation.

INCREASE EXERCISE & MOVEMENT

Swim, Cycle, Sprint & Walk. Try Aerobics, Gardening, Strength Training, Badminton & Ping-Pong.

Strength, Balance, Agility, Brain-derived Neurotrophic Factor (BDNF) & Cerebral Blood Flow (CBF).

GET GOOD SLEEP

Get Outdoors Daily, Improve Sleep Hygiene & Unplug.

Daylight, Fresh Air, Vitamin D, Normalise Sleep-wake Cycle.

REDUCE STRESS & ANXIETY

Forest Bathing; Pets & Wildlife; Tai chi, Yoga, Meditation, Deep Breathing, Reiki, Sauna & Massage.

Nature-relatedness & Relaxation; Energy Balance, Oxygenation & Increased Serotonin; Peace & Gratitude.

STAY SOCIALLY ACTIVE

Join a Group. Be a volunteer. Sing in a Choir. Try Social Dancing, Community Gardening & Intergenerational, Multicultural Activities.

Meaning, Acceptance, Belonging, Communication, Confidence, Empathy & Friendship.

CHALLENGE YOUR BRAIN

Sketch, Sew, Paint & Create. Do Math, Puzzles & Computer Games. Join U3A, Play Music & Learn Something New.

Stimulate Cognition; Improve Memory; Grow Brain Cells; Build Cognitive Reserve, Maintain Life Skills & Function.

Useful Resource Links: 1 2 3 4 5 6 7

Reversal of Cognitive Decline: 100 Patients

Bredesen DE, Sharlin K, Jenkins D, Okuno M, Youngberg W, et al. (2018) Reversal of Cognitive Decline: 100 Patients. J Alzheimers Dis Parkinsonism 8: 450. doi: 10.4172/2161-0460.1000450

Journal of
Alzheimer's Disease & Parkinsonism

Bredesen et al., J Alzheimers Dis Parkinsonism 2018, 8:5
DOI: 10.4172/2161-0460.1000450

Case Report Open Access

Reversal of Cognitive Decline: 100 Patients

Dale E Bredesen[1*], Kenneth Sharlin[2], David Jenkins[3], Miki Okuno[3], Wes Youngberg[4], Sharon Hausman Cohen[5], Anne Stefani[5], Ronald L Brown[6], Seth Conger[6], Craig Tanio[7], Ann Hathaway[8], Mikhail Kogan[9], David Hagedorn[10], Edwin Amos[11], Amylee Amos[12], Nathaniel Bergman[13], Carol Diamond[14], Jean Lawrence[15], Ilene Naomi Rusk[16], Patricia Henry[16] and Mary Braud[16]

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Abstract

The first examples of reversal of cognitive decline in Alzheimer's disease and the pre-Alzheimer's disease conditions MCI (Mild Cognitive Impairment) and SCI (Subjective Cognitive Impairment) have recently been published. These two publications described a total of 19 patients showing sustained subjective and objective improvement in cognition, using a comprehensive, precision medicine approach that involves determining the potential contributors to the cognitive decline (e.g., activation of the innate immune system by pathogens or intestinal permeability, reduction in trophic or hormonal support, specific toxin exposure, or other contributors), using a computer-based algorithm to determine subtype and then addressing each contributor using a personalized, targeted, multi-factorial approach dubbed ReCODE for reversal of cognitive decline.

An obvious criticism of the initial studies is the small number of patients reported. Therefore, we report here 100 patients, treated by several different physicians, with documented improvement in cognition, in some cases with documentation of improvement in electrophysiology or imaging, as well. This additional report provides further support for a randomized, controlled clinical trial of the protocol and the overall approach.

Whole Systems Dementia Treatment: An Emerging Role in the NHS?

Dr. Garuth Chalfont, Research Associate, Division of Health Research, Lancaster University
Dr. Jane Simpson, Director of Education, Division of Health Research, Lancaster University
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Professor Christine Milligan, Director C4AR, Division of Health Research, Lancaster University

INTRODUCTION

Alzheimer's disease (AD) is increasingly understood as a disease state determined by multiple factors and mechanisms. Besides the usual risk factors of diet, exercise, cognitive stimulation and sleep hygiene, one recent review lists a wide range of other risk factors.[1] Although non-pharmacological treatments for dementia are perhaps less known among medical practitioners, the latest NICE guidance calls for these as a first point of call.[2] An integrative, complementary or 'whole systems' approach is designed to activate the body's inherent healing mechanisms and treat the root cause of illness as well as associated symptoms.[3] Dementia often precedes other chronic conditions such as diabetes and heart disease, and improves through similar pathways of diet and lifestyle changes. Therefore, targeting the causative factors for dementia would have the added benefit of addressing more broadly a wide range of common morbidities in older adults. We aim in this paper to introduce the concept of multimodal treatment for dementia (MT4D), share evidence from the literature including case studies, identify precedents and a transformation agenda in the NHS, summarise initial and current practices in the Memory Assessment Service (MAS) and describe research proposing whole systems dementia treatment.

MULTIMODAL APPROACHES

Findings from a recent systematic review of multimodal non-pharmacological interventions to improve cognition for people with dementia[4] identified a diverse combination of interventions, including cognitive enhancement therapies, physical exercise and rehabilitation, psychological and psychosocial therapies, nutrition and diet, sleep hygiene, stress reduction, detoxification, hormonal health and oxygen therapy. In 90% of the studies, participants were reported to have cognitive improvements, stability with their dementia or a delay in their decline. The case studies were of particular interest as the practitioners used in-depth assessments and prescribed up to nine different therapeutic modalities.

One case study from the USA reported an individualized Alzheimer's treatment protocol which reversed cognitive decline in 10 patients with mild cognitive impairment, memory loss and early AD.[5] This novel therapeutic approach enhanced patient metabolism through diet, exercise, improved sleep, stress reduction, cognitive stimulation, vitamins and supplements.[6] A biomedical examination included checking for genetic risk factors, hormone and dietary deficiency, metal toxicity, infections, mold, Lyme disease, etc. For most of these patients, the author maintained improvements began within 3 months.

A further case study in Spain involved a 78 year old female who:

"suffered mental decline for about 1 year. She could no longer conduct her usual activities and home chores and could not hear without a hearing aid. Brain magnetic resonance imaging (MRI) performed in February, 2008, revealed degenerative changes. Treatment consisted of repeated sessions of intermittent hypoxic training (IHT), and individualized vitamins, amino acids, microelements, supplementation, and nutritional adjustment. Until April, 2009, the patient had completed four cycles of IHT and 8 months of the supplementation program. The patient gradually recovered her healthy mental state; she resumed shopping and cooking and began playing piano again, which she was not capable of doing last year. An MRI of her brain performed during April, 2009, showed no degenerative changes."[7]

Some have argued that nutritional, botanical, and stimulatory therapies may provide more benefit and with fewer adverse consequences than conventional medications.[8] But opportunities also exist for adjunct therapies that could assist and enhance the normally prescribed pharmaceutical treatments. For instance, recent studies have shown the efficacy of multimodal interventions as adjunct therapies for stable doses of memantine, cholinesterase inhibitors or antidepressants.[9,10] One Italian study reported on 50 patients with probable AD during a comprehensive rehabilitation programme in a specialized hospital unit for an average of 26 days. The primary therapy was Reality Orientation Therapy (ROT) integrated with individualised cognitive approaches, plus psychotherapy and/or physical therapy as needed. Significant effects were found on cognitive and functional outcomes, suggesting that a combination of therapy, rehabilitation, support and medication may be useful.[11] Because dementia is complex and multifactorial, early interventions that target multiple risk factors are most likely to be effective.

PRECEDENTS IN PRIMARY CARE

Integrating complementary treatment methods into the NHS has shown beneficial outcomes. For instance, statistically significant fewer antibiotics were prescribed through Integrative Medicine (IM) approaches being taken in GP surgeries.[12] Complementary and integrative interventions such as diet, exercise, cognitive training, and vascular risk monitoring utilized in primary care may preserve cognitive function.[13, 14] A recent review of complementary and integrative gastroenterology found that polyphenols including curcumin, resveratrol and epigallocatechin-3-gallate (EGCG), have supportive data for the treatment of ulcerative colitis (UC) flares; yoga has beneficial effects on symptoms, anxiety and physical

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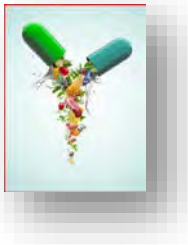
See *Evidence-based Preventative Strategies for Dementia* and *References for Dementia Prevention* on www.chalfontdesign.com

RAD-ISH

(Research Addressing Dementia – Interventions Supporting Health)



1. Nutrition

2. Physical Activity

3. Socialising

4. Mental Stimulation

5. Sleep Hygiene

6. Stress Reduction

7. Mind-body

8. Detox

9. Emotions

10. Connection to Nature

We propose an enhanced level of service (root cause investigation and treatment) to the existing NHS Memory Assessment Service (MAS) pathway of diagnosis, care and support.

- The 1 year intervention includes 30-40 patients with mild cognitive impairment or early dementia from two Lancashire memory services.
- Carers or family members are also involved.
- GPs with Functional Medicine training will carry out a root cause analysis, prescribe a lifestyle medicine Rx, approved by the patient's GP.
- Patients will be offered group activity sessions in the community such as dancing, gardening, walking, mind/body exercises, meditation or sports.
- Routine testing will be done every 3 months (biophysical, neuropsychological, cognitive tests) and compared to case controls.

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Would you like to share your views…?

1. Would you be open to trying a multimodal approach if it was available?

2. What would be some of the personal barriers?

3. Would your family and friends be emotionally supportive of this new kind of treatment?

4. Do you (or your friends and family) think "there is nothing that will help", or memory problems are "just a normal part of ageing"?

5. Some people told me that when their parent developed memory problems their other parent actually minimised the problems or kept it a secret from the rest of the family until it was "so bad that there was not much that could be done". They have said that "if they had been open to getting help early on" then the outcomes might have been different. What do you think…?

6. What support might you each need?

7. Is there any other advice you can give me before I speak with potential trial participants?

PLEASE RESPOND BY EMAIL TO:

dementiapioneers@gmail.com

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A big THANK YOU to the **Research Design Service North West** for offering support to the **Dementia Pioneers Roadshow 2019** to meet and speak with local people at **The Manor Inn** about a novel dementia treatment approach and to hear your views…!

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