

Feed Your Mental Health

Drew Ramsey, MD

Founder, The Brain Food Clinic Assistant Clinical Professor of Psychiatry Columbia University



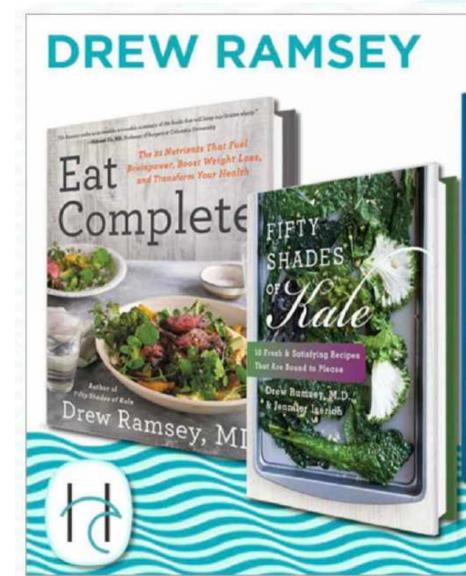
"Of course you feel great! These things are loaded with antidepressants."



Ramsey Disclosures

- Editorial Board, Medscape Psychiatry
- Advisory Board, Men's Health Magazine
- Author
- I will not discuss the off-label use of any medications







Eat to Beat Depression and Anxiety

Nourish Your Way to Better Mental Health in Six Weeks

Drew Ramsey, MD











\$1 TRILLION Lost due to mental health disorders #1 Worldwide Cause Disability



1 in 5

Adults in the U.S. experience mental illness each year





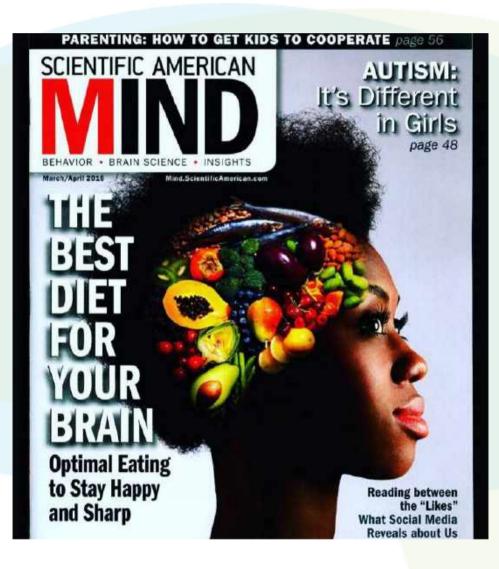
59%

Adults with mental illness do not receive treatment

Fewer than 50%

of **Children** with mental health conditions receive help











Your Brain & Food

→Consumes 420 calories/day
→20% of daily calories
→Composed of 60% Fat
→PUFAs and Cholesterol

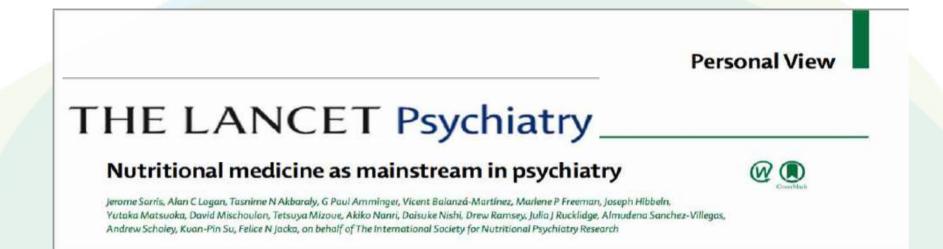




Nutritional Psychiatry

The use of nutrition to optimize brain health and to treat and prevent mental health disorders.





"Although the determinants of mental health are complex, the emerging and compelling evidence for nutrition as a crucial factor in the high prevalence and incidence of mental disorders suggests that diet is as important to psychiatry as it is to cardiology, endocrinology, and gastroenterology."



This training will walk you through the **evidence and fundamentals** of Nutritional Psychiatry so that every dietary recommendation you make to your patients is intentional and backed by the latest research. Here's what you can expect:

- Module 1: Introduction to Nutritional Psychiatry
- Module 2: Nutritional Psychiatry Fundamentals
- Module 3: Nutritional Psychiatry Evidence
- Module 4 & 5: Key Nutrients & Food Categories
- Module 6: Nutritional Psychiatry in Clinical Practice

When you complete this program, you'll have everything you need to offer nutritional psychiatry as an additional service, and **start prescribing food to your patients** *with confidence*.

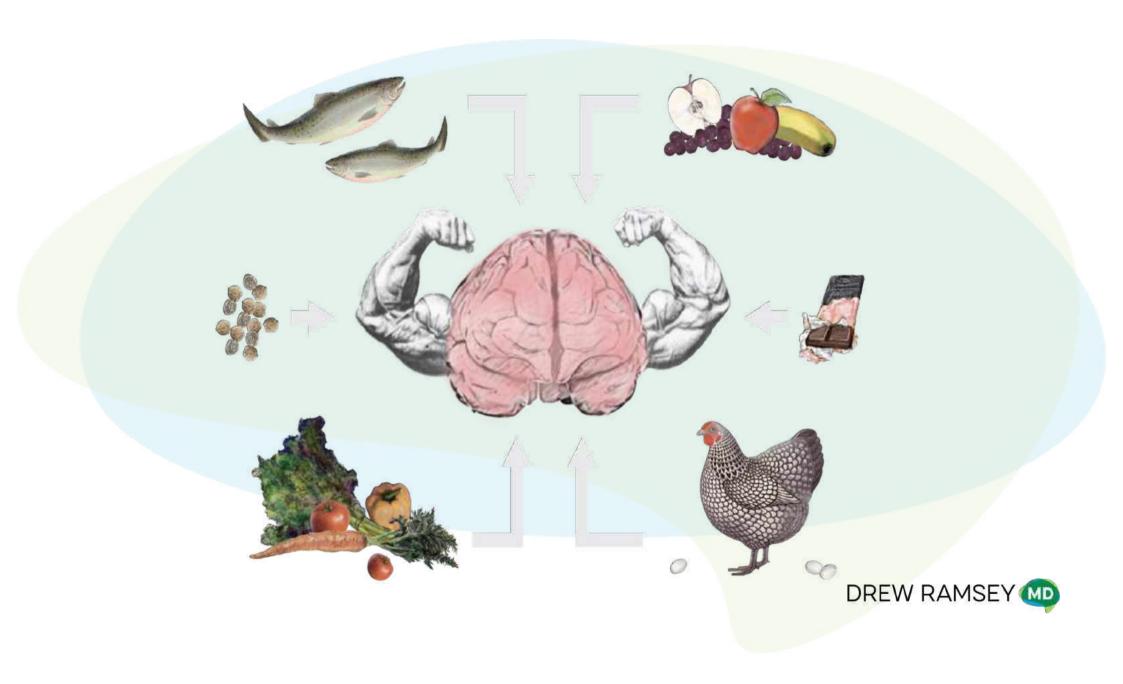


Generate a Reliable Stream of High Quality Referrals

Nutritional Psychiatry will help differentiate your practice and can help position you as the "go-to" practitioner in your community. Prospective patients will begin to seek you out directly and be excited to work with you because you offer something no one else does.



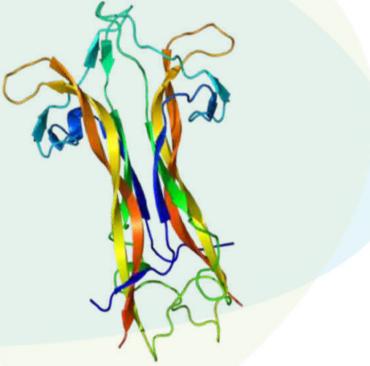




Brain-Derived Neurotrophic Factor (BDNF)

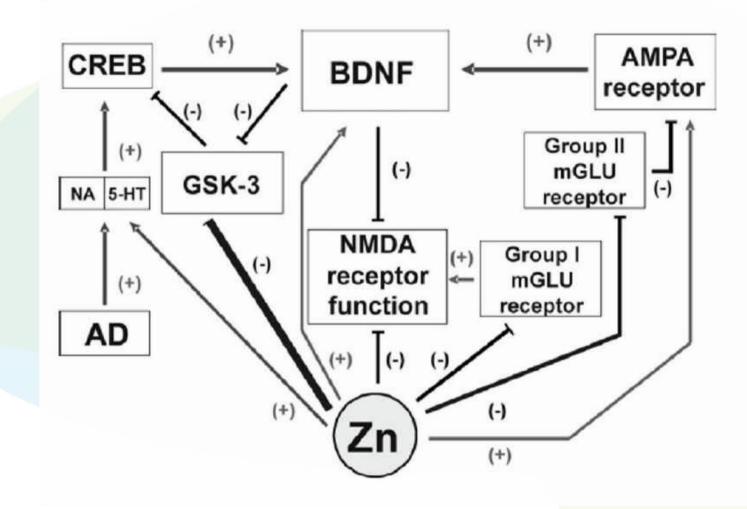
- Promotes neuron development, function, and survival
- Most abundant neurotrophin
- BDNF & it's TrkB receptor

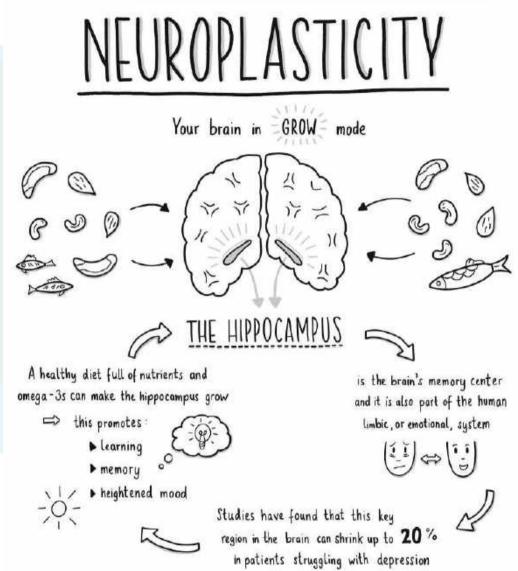
Everywhere!



BRAIN GROW!







DREW RAMSEY MD

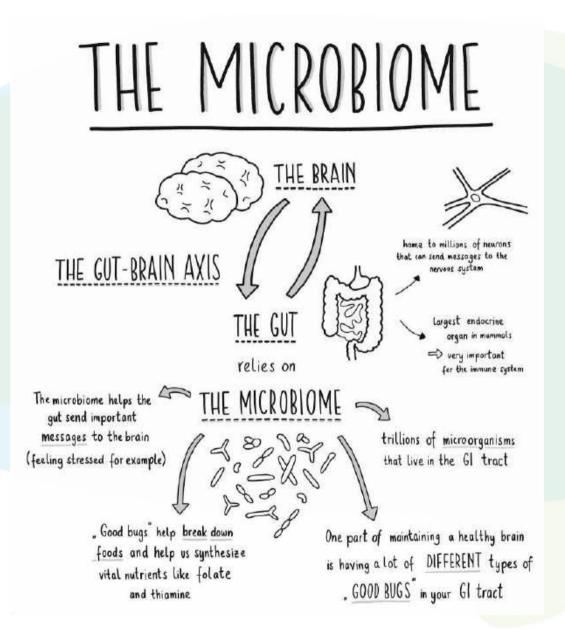
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Neuroinflammation





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Journal Nutritional Neuroscience > An International Journal on Nutrition, Diet and Nervous System Volume 20, 2017 - Issue 3

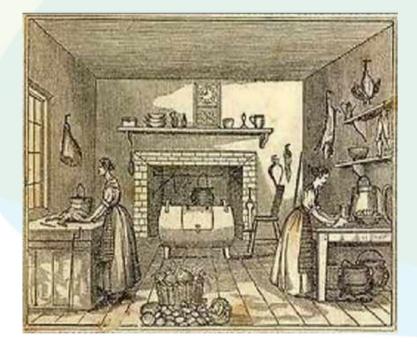
Original Articles

Dietary recommendations for the prevention of depression

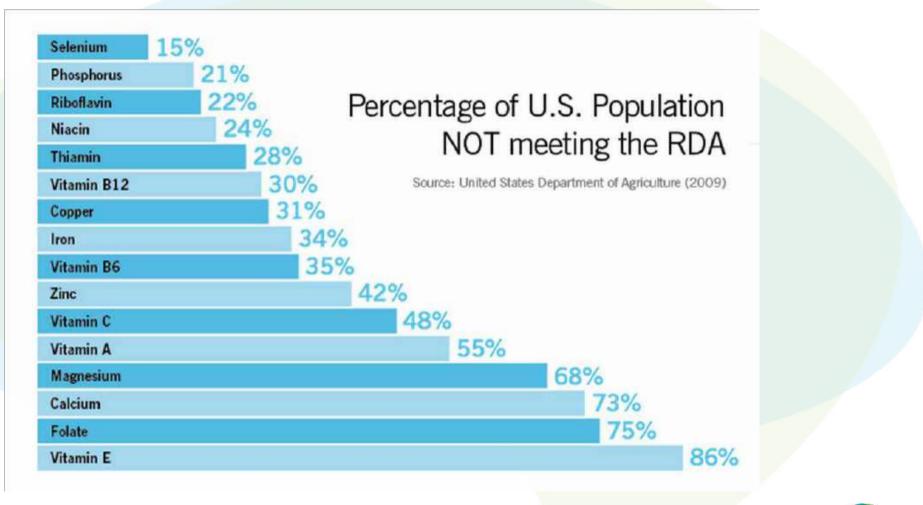
R.S. Opie, C. Itsiopoulos, N. Parletta, A. Sanchez-Villegas, T.N. Akbaraly, A. Ruusunen & Pages 161-171 | Published online: 02 Mar 2016

- 1. Follow 'traditional' dietary patterns, such as the Mediterranean, Norwegian, or Japanese diet
- 2. Increase consumption of fruits, vegetables, legumes, wholegrain cereals, nuts, and seeds
- 3. Include a high consumption of foods rich in omega-3 polyunsaturated fatty acids
- 4. Replace unhealthy foods with wholesome nutritious foods
- 5. Limit your intake of processed-foods, 'fast' foods DREW RAMSEY COMMERCIAL bakery goods, and sweets.

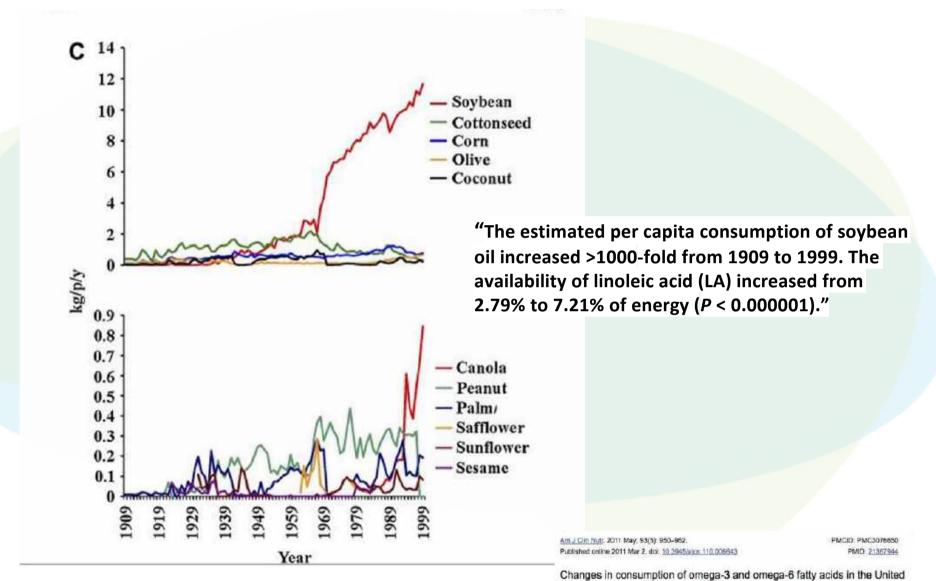
Dietary Change in last 100 years



- Whole Food to Processed
- **T**Sugar and Refined Carbs
- Animal to Vegetable Fats
- Omega-3 to Omega-6
- New Molecules: Food Dyes, Preservatives, Trans-fats







States during the 20th century^{1,2,3}

Tanya L Blasbalo, Joseph R Hibboln, Christopher E Ramaden, Sharon F Maldhraak, and Robert R Rawlings

The Rise of Vegetable Oils Omega-3 – Omega-6

1 - 40



1 - 39

The Mediterranean Diet Does Good Food = Good Mood?

Table 2. Association Between Adherence to the Mediterranean Dietary Pattern and Risk of Depression

	Adherence to the Mediterranean Dietary Pattern Score (Median Score)					P Value
Variable	0-2 (2)	3 (3)	4 (4)	5 (5)	6-9 (6)	for Trend
No. of cases per person-years	126/8866	91/8253	97/9240	67/8131	99/9715	
Crude rates per 103 (95% CI)a	14.2 (11.8-16.9)	11.0 (8.9-13.5)	10.5 (8.5-12.8)	8.2 (6.4-10.5)	10.2 (8.3-12.4)	
Model 1		Children de la constante.	and the second second	C		`
HR (95% CI) ^b	1 [Reference]	0.74 (0.57-0.98)	0.66 (0.50-0.86)	0.49 (0.36-0.67)	0.58 (0.44-0.77)	<.001
Model 2						
No. of cases per person-years	67/8748	48/8167	46/9138	32/8061	44/9605	<.001
HR (95% CI) ^b	1 [Reference]	0.73 (0.50-1.06)	0.56 (0.38-0.83)	0.42 (0.27-0.66)	0.50 (0.33-0.74)	
Model 3		2000 - M	N 22 005			
No. of cases per person-years	86/8726	65/8155	61/9116	50/8075	75/9631	.007
HR (95% CI) ^b	1 [Reference]	0.79 (0.57-1.09)	0.67 (0.48-0.93)	0.56 (0.39-0.80)	0.69 (0.50-0.96)	

Model 1: sex, age, smoking status, BMI, physical activity, energy intake, employment Model 2: Excluded Participants w/depression dx in first 2 years Model 3: Excluded Participants with antidepressant on f/u, No DX

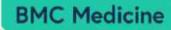
Sánchez- Villegas A et al. Arch of Gen Psychiatry 2009



Does Dietary Pattern Influence Depression Risk?

Study	OR (95% CI)	% Weight
Akbaraly 2013: female (38)	0.35 (0.19, 0.64)	1.91
Akbaraly 2013: male (36)	1.38 (0.91, 2.10)	3.26
Chocano-Bedoya 2013 (19)	1.04 (0.95, 1.13)	8.66
Skarupski 2013 (33) 😹	0.88 (0.81, 0.96)	8.69
Crichton 2013 (20)	0.86 (0.56, 1.33)	3.18
Jacka 2010 (23)	0.85 (0.64, 1.12)	5.17
Jacka 2011: male (22) -	0.83 (0.70, 0.99)	7.10
Jacka 2011: female (22)	0.71 (0.60, 0.85)	7.03
Sánchez-Villegas 2009 (32)	0.64 (0.56, 0.74)	7.72
Klassen 2009 (24)	0.45 (0.22, 0.94)	1.41
Mamplekou 2010 (27) 👘 📾	1.03 (0.98, 1.09)	9.08
Beydoun 2010: male (17)	0.84 (0.70, 1.01)	6.87
Beydoun 2010: female (17)	0.74 (0.63, 0.87)	7.30
Beydoun 2010: male (18)	0.88 (0.75, 1.03)	7.35
Beydoun 2010: female (18)	0.91 (0.79, 1.05)	7.70
Féart 2009 (21)	0.80 (0.62, 1.02)	5.59
Sugawara 2012 (34)	1.03 (0.57, 1.87)	1.96
Overall (I-squared = 81.8%, p<0.001)	0.84 (0.76, 0.92)	100.00
NOTE: Weights are from random effects analysis		
0.2 1.0	4.0	







Home About Articles Submission Guidelines

Research article Open Access Open Peer Review

Abstract Background Methods Results Discussion Conclusions Declarations References

A randomised controlled trial of dietary improvement for adults with major depression (the 'SMILES' trial)

Felice N. Jacka III, Adrienne O'Neil, Rachelle Opie, Catherine Itsiopoulos, Sue Cotton, Mohammedreza Mohebbi, David Castle, Sarah Dash, Cathrine Mihalopoulos, Mary Lou Chatterton, Laima Brazionis, Olivia M. Dean, Allison M. Hodge and Michael Berk BMC Medicine 2017 15:23 https://doi.org/10.1186/s12916-017-0791-y © The Author(s). 2017 Received: 31 August 2016 Accepted: 11 January 2017 Published: 30 January 2017



SMILES

- 12-week, parallel-group, single blind, RCT
- Adjunctive dietary intervention vs. social support"befriending" protocol
- 7 individual nutritional consulting sessions clinical dietician.
- N = 67 (diet intervention, n = 33; control, n = 34).
- Remission (MADRS score <10) 32.3% (n = 10) intervention and 8.0%
 (n = 2) controls respectively
- Number needed to treat (NNT) based on remission scores was 4.1
 (95% CI of NNT 2.3–27.8).

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Nutritional Neuroscience An International Journal on Nutrition, Diet and Nervous System

ISSN: 1028-415X (Print) 1476-8305 (Online) journal homepage: https://www.tandfonline.com/loi/ynns20

A Mediterranean-style dietary intervention supplemented with fish oil improves diet quality and mental health in people with depression: A randomized controlled trial (HELFIMED)

Natalie Parletta, Dorota Zarnowiecki, Jihyun Cho, Amy Wilson, Svetlana Bogomolova, Anthony Villani, Catherine Itsiopoulos, Theo Niyonsenga, Sarah Blunden, Barbara Meyer, Leonie Segal, Bernhard T. Baune & Kerin O'Dea

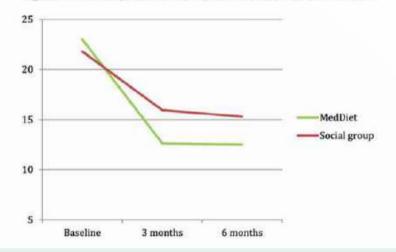


Figure 4 DASS depression scores at baseline, 3 and 6 months.

- N = 152
- MedDiet cooking workshops for 3 months + low-dose fish oil 6 months vs. social groups for 3 months.
- Depression scores improved by 45% in the MedDiet, 26.8% in the Social group.
- Changes sustained at 6 months.

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JAMA Network[™]

Original Investigation

March 5, 2019

Effect of Multinutrient Supplementation and Food-Related Behavioral Activation Therapy on Prevention of Major Depressive Disorder Among Overweight or Obese Adults With Subsyndromal Depressive SymptomsThe MooDFOOD Randomized Clinical Trial

Mariska Bot. PhD¹: Ingeboro A. Biouwer. PhD²: Misuel Roce. PhD²: Margalida Gill. PhD²: Branda W. J. H. Penninx. PhD¹: Ed Watkins. PhD²: Gerard van Grootheest. MSp¹: Meke Gabout. MSp¹: Ulrich Hegerl. PhD²: Margalida Gill. PhD²: Matthew Owens. PhD²: Margalida Gill. PhD²: The Mode PhD²: Control of the Mode PhD²: Control of the Mode PhD²: Control of the Mode PhD²: Margalida Gill. PhD²: Batthew Owens. PhD²: The Mode PhD²: The PhD²: The Mode PhD²: The PhD²:

N = 1025

12-month follow-up, 105 (10%) developed MDD:

25 (9.7%) in placebo without therapy,

26 (10.2%) in placebo with therapy,

32 (12.5%) in supplement without therapy

22 (8.6%) in supplement with therapy group.

None of the treatment strategie effected MDD onset.



"These results are the first to show that young adults with elevated depression symptoms can engage in and adhere to a diet intervention, and that this can reduce symptoms of depression."

RESEARCH ARTICLE

A brief diet intervention can reduce symptoms of depression in young adults – A randomised controlled trial

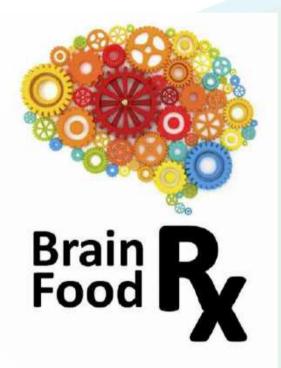
Heather M. Francis^{1*}, Richard J. Stevenson¹, Jaime R. Chambers^{2,3}, Dolly Gupta¹, Brooklyn Newey¹, Chai K. Lim⁴

1 Psychology Department, Macquarie University, Sydney, NSW, Australia, 2 Sydney Integrative Medicine, Level 1, Sydney, NSW, Australia, 3 Cooper St Clinic, Sydney, NSW, Australia, 4 Biomedical Sciences, Macquarie University, Sydney, NSW, Australia



Mechanisms

 Nutrient deficiency/Insufficiency
 Neuroplasticity and BDNF
 Inflammation
 Plants and phytonutrients
 Microbiome
 Toxic Diet Effects – *trans*-fats, food dyes, increased medication load



Brain Food in the Clinic

Build A Better Brain

- What is a Brain Food?
- Nutrient Density
- Dietary Patterns
- Neuroplasticity
- FOOD

TARGETS

 Mood, Memory, Focus, Energy, Sleep, Cognitive Function



"Let's talk about what you eat."

NUTRITIONAL PSYCHIATRY ASSESSMENT A Day in the Life of an Eater

What's the Dietary Pattern?
Relationship with Food?
Avoid Diet Dogma in Clinical Practice!
High Yield Foods and Food Categories Plants, Seafood, Meat, Snacks

MOTIVATIONS

Diagnosis, weight, internal or external? FOOD SKILLS

COSA Cooking, Organizing, Sourcing, Access SMART GOALS - Specific, Measurable, Achievable, Realistic and Timely



"I Eat a Healthy Diet...."

Count Calories Avoid Cholesterol Avoid Fat No Red Meat 2 Glasses Red Wine











EAT TO BEAT DEPRESSION - SIMPLE SWAPS

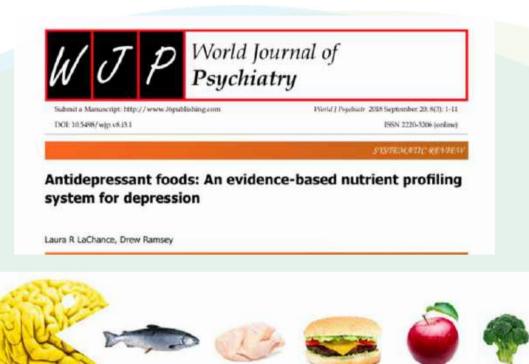


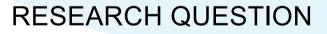
Brain Food Nutrients

- Omega-3s
- Folates
- Fiber
- Vitamin B12
- Vitamin D
- Vitamin B1 (thiamine)
- Magnesium
- Calcium
- Vitamin E (Tocopherols & Tocotrienols)

- Choline
- Iron
- Zinc

Folic Acid





→ What are the most *nutrient dense* foods to prevent and promote recovery from depressive disorders ?



Top Plant Foods

- 1. Watercress
- 2. Spinach
- 3. Mustard, Turnip, or Beet Greens
- 4. Lettuces (red, green, romaine)
- 5. Swiss Chard
- 6. Fresh Herbs (basil, cilantro, parsley)
- 7. Chicory Greens
- 8. Pummelo
- 9. Peppers (bell, serrano, jalapeno)
- 10. Kale or Collards
- 11. Pumpkin
- 12. Dandelion Greens
- 13. Cauliflower
- 14. Kohlrabi
- 15. Red Cabbage
- 16. Broccoli
- 17. Brussels Sprouts
- 18. Acerola
- 19. Butternut Squash
- 20. Papaya

Top Animal Foods

- 1. Oysters
- 2. Liver and Organ Meats (spleen, kidney, heart)
- 3. Poultry Giblets
- 4. Clam
- 5. Mussels
- 6. Octopus
- 7. Crab
- 8. Goat
- 9. Tuna
- 10. Smelt
- 11. Fish Roe
- 12. Bluefish or Wolffish
- 13. Pollock
- 14. Lobster
- 15. Rainbow Trout
- 16. Snail or Whelk
- 17. Salmon
- 18. Herring
- 19. Emu
- 20. Snapper





EAT TO BEAT DEPRESSION - TOP NUTRIENTS



Top Iron Foods (per 100 grams)



28mg (155%)



23 mg (129%)



6.1mg (34%)



15mg (83%)





17mg (97%)



nature neuroscience

Article | Published: 26 October 2014

Enhancing dentate gyrus function with dietary flavanols improves cognition in older adults

Adam M Brickman, Usman A Khan, Frank A Provenzano, Lok-Kin Yeung, Wendy Suzuki, Hagen Schroeter, Melanie Wall, Richard P Sloan & Scott A Small 🖂

Nature Neuroscience 17, 1798–1803(2014) | Cite this article 923 Accesses | 133 Citations | 1242 Altmetric | Metrics

- Controlled randomized trial
- 50–69-year-old subjects who consumed ei or low cocoa flavanol–containing diet for 3 months.
- A high-flavanol intervention was found to enhance DG function, as measured by fMRI and by cognitive testing.

The New Hork Times

To Improve a Memory, Consider Chocolate



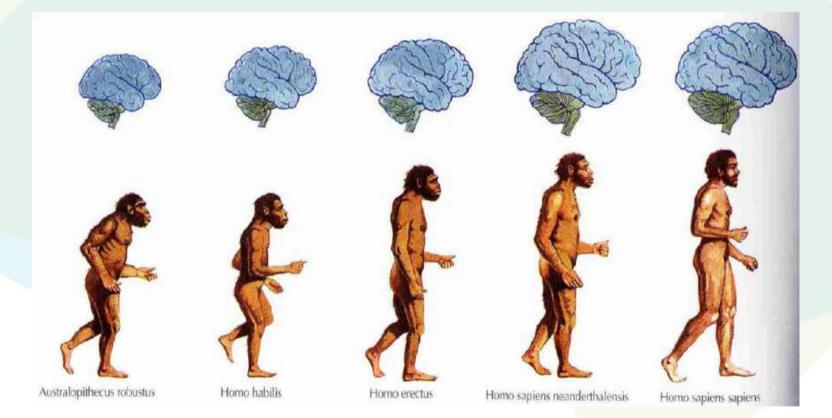
Contra Bayanol extracted from fresh cocca beans. Mars, Incorporated

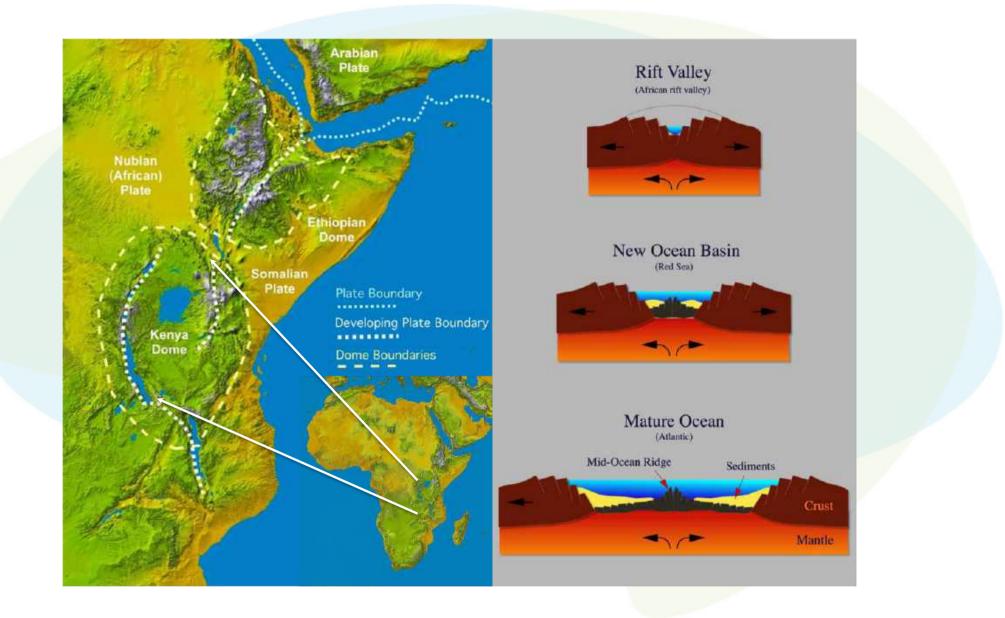
By Pam Belluck

1



Survival of the Fattest

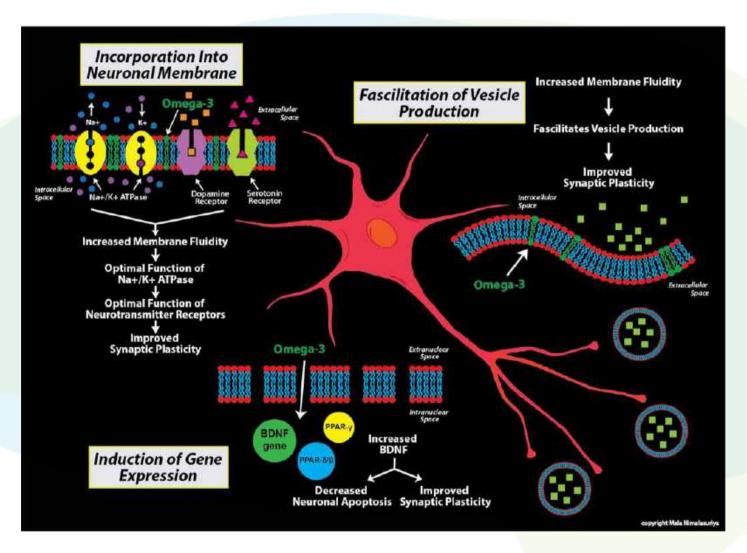






Seafood









High Omega-3/Low Mercury Fish

Variety of Fish	Milligrams of EPA and DHA Per 4 Ounces of Cooked Fish	Micrograms of Mercury Per 4 Ounces of Cooked Fish
Mackerel*	1,350 – 2,100	8 – 13
Shad	2,300 - 2,400	5 – 10
Oysters	1,550	2
Salmon	700 – 900	2
Herring	2,300 - 2,400	5 – 10
Sardines	1,100 — 1,600	2
Anchovies	2,300 – 2,400	5 – 10
Rainbow Trout	1,000 — 1,100	11





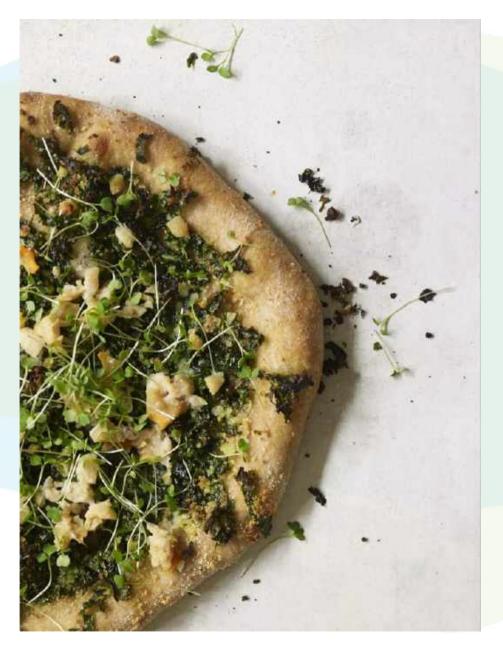




Photo by Ellen Silverman





The Rule of Kale BRAIN FOOD =

Nutrient Density Culinary Versatility Local Availability

Leafy Greens: Practical Advice

- Massage thicker greens (kale) before eating raw
- Experiment many options, find ones you like
- Meal Prep: Sauté leafy greens in the beginning of the week
- Add a handful of leafy greens to every meal (eggs, smoothies)
- The Pasta Trick
- Organic matters
- Pesto
- Beet Greens





23 Almonds 162 Kcals25% off!Vitamin E37%Manganese37%Magnesium20%Protein6 grams

Nuts & Seeds



Beans & Legumes





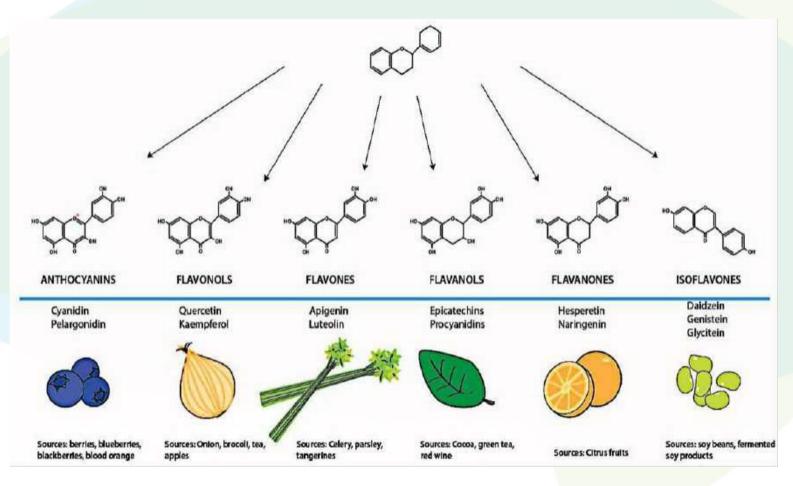
Photo by Ellen Silverman





Photo by Ellen Silverman

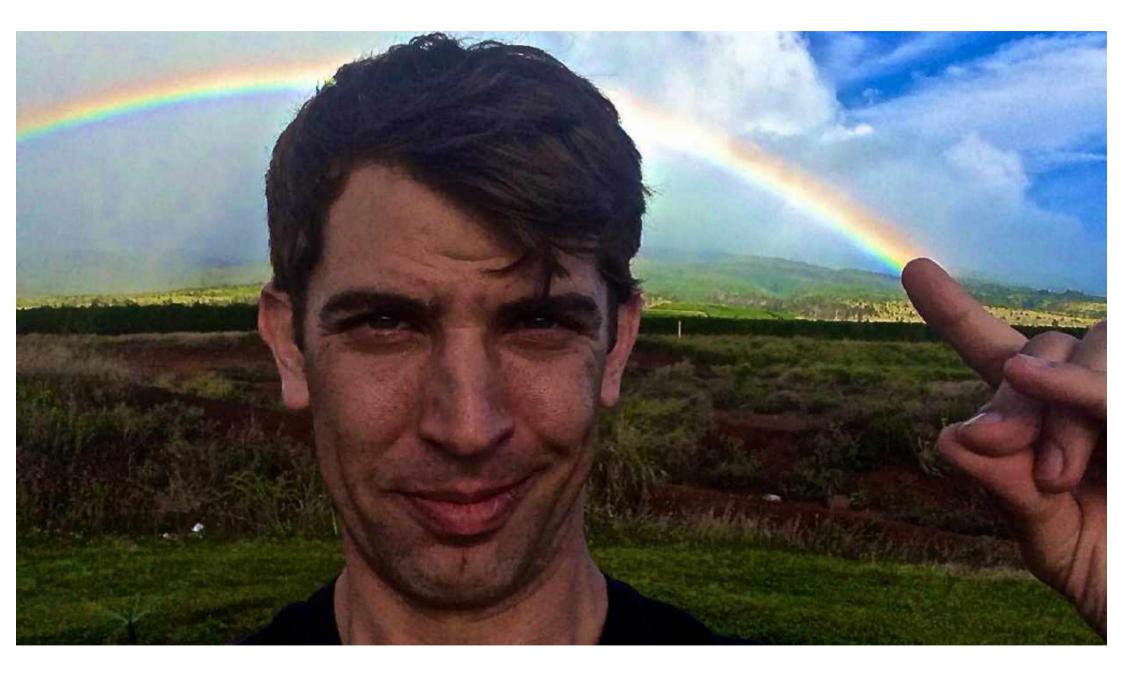
The Flavonoids



Rainbow Colors = Phytonutrients









Six Servings Per Day?!



BIPOLAR DISORDERS

ORIGINAL ARTICLE

Adjunctive probiotic microorganisms to prevent rehospitalization in patients with acute mania: A randomized controlled trial

Faith Dickerson , Maria Adamos, Emily Katsafanas, Sunil Khushalani, Andrea Origoni, Christina Savage, Lucy Schweinfurth, Cassie Stallings, Kevin Sweeney, Joshana Goga, Robert H Yolken

First published: 25 April 2018 | https://doi.org/10.1111/bdi.12652 | Cited by: 8

Neurosci Biobehav Rev. 2019 Jul;102:13-23. doi: 10.1016/j.neubiorev.2019.03.023. Epub 2019 Apr 17.

Prebiotics and probiotics for depression and anxiety: A systematic review and meta-analysis of controlled clinical trials.

Liu RT¹, Walsh RFL², Sheehan AE².



Journal of Affective Disorders Volume 228, 1 March 2018, Pages 13-19

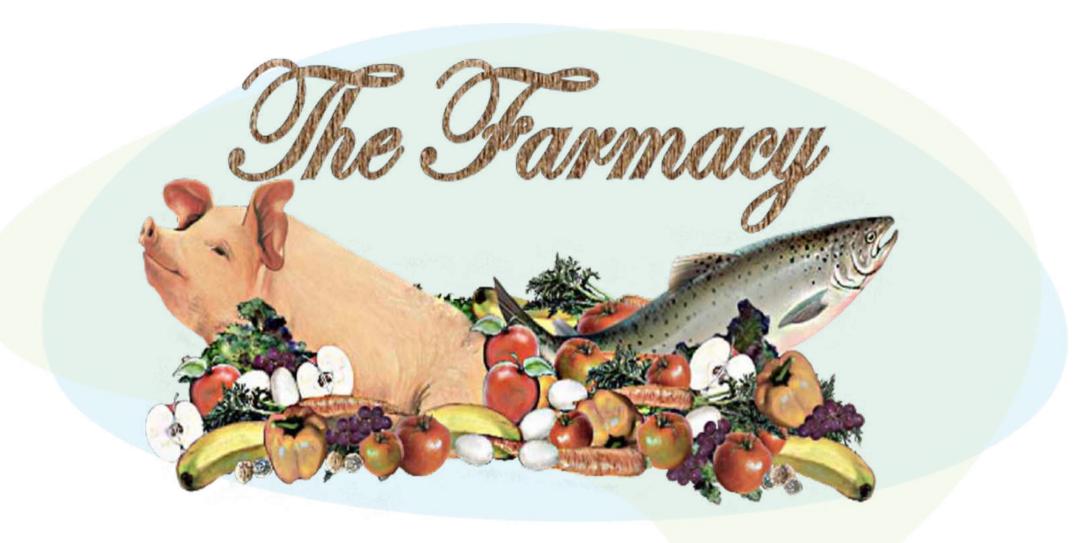


Review article

A meta-analysis of the use of probiotics to alleviate depressive symptoms

Qin Xiang Ng * A 🕮, Christina Peters ^b, Collin Yih Xian Ho ^c, Donovan Yutong Lim ^d, Wee-Song Yeo ^{c, e}





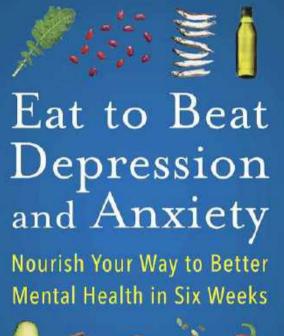






Can You Eat to Build a Better Brain?

- BRAIN GROW!
- Neuroplasticity and Inflammation
- Dietary pattern and Nutrient Density
- Colors Fats Fun
- Don't be scared of fish! Remember Clams!
- Whole Foods or MDP
 Protective for Depression & Dementia?
- Learn from History Put the Genie Back in the Bottle DREW RAMSEY MO





Drew Ramsey, MD

Feed Your Mental Health!

The Brain Food Clinic Sign up for our Friday Feels Newsletter Nutritional Psychiatry Clinician Training New Healing The Modern Brain ecourse DrewRamseyMD.com @DrewRamseyMD

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