

Feed Your Mental Health



**HEALING
THE
MODERN
BRAIN**

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Columbia University

DREW RAMSEY 

Learning Objectives

1. Rapidly assess a patient's diet for high-yield nutritional interventions
2. Appreciate the central tenets of Nutritional Psychiatry
3. Review the recent evidence and RCTs connecting food choice and depression
4. Gain confidence in partnering with patients on foods and dietary patterns linked to depression risk
5. Review the key food categories in Nutritional Psychiatry

Ramsey Disclosures

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



menshealthm...  Message 

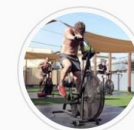
7,180 posts 1.7M followers 976 following

Men's Health

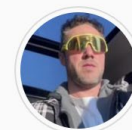
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Cory Rich...



Zac Clark ...



Ask Dr. Br...



Brainfood



Daily Cha...

GETTY IMAGES

Health

17 Deep Conversations About Mental Health We Had in 2020

Each week, *Men's Health* took to Instagram Live to find out how people coped during a difficult year. Here are a few of our favorite *Friday Sessions*.

BY VANESSA ETIENNE AND JOSHUA OCAMPO PUBLISHED: JAN 1, 2021



Ramsey Big 5 Nutritional Psychiatry Self-Assessment (RB5NP-S)

1. Besides a salad, I eat greens as _____.
 2. My three favorite fiber foods?
 3. I love to dip _____ in olive oil.
 4. My Seafood meals this week will be _____.
 5. This week I have eaten _____ CFUs.
- Bonus: As an eater, I feel too much guilt about _____
and not enough JOY about _____.

Can What We Eat Affect How We Feel?

Nutritional psychiatrists counsel patients on how better eating may be another tool in helping to ease depression and anxiety and may lead to better mental health.



Tony Cenicola/The New York Times

By Richard Schiffman

March 28, 2019

WHO MADE THAT?

Who Made That Kale?



Jens Mortensen for The New York Times

By Pagan Kennedy

Oct. 18, 2013

How Food May Improve Your Mood

The sugar-laden, high-fat foods we often crave when we are stressed or depressed, as comforting as they are, may be the least likely to benefit our mental health.





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\$1 TRILLION

- **Lost productivity worldwide due to depression and anxiety**
- **#1 Worldwide Cause Disability**
- **US Depression economic burden increased 37.9% from 2010 → 2020**
\$236.6B → \$326.2B

WHO: <https://www.who.int/teams/mental-health-and-substance-use/promotion-prevention/mental-health-in-the-workplace>

Greenberg, P.E., Fournier, AA., Sisitsky, T. *et al.* The Economic Burden of Adults with Major Depressive Disorder in the United States (2010 and 2018).

PharmacoEconomics 39, 653–665 (2021). <https://doi.org/10.1007/s40273-021-01019-4>

1 in 5

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



59%

Adults with mental illness
do not receive treatment

75% of patients with
depression in low +
middle income countries
receive NO care

Fewer than **50%**

of Children with mental health conditions
receive help

PARENTING: HOW TO GET KIDS TO COOPERATE *page 56*

SCIENTIFIC AMERICAN

MIND

BEHAVIOR • BRAIN SCIENCE • INSIGHTS

March/April 2016

Mind.ScientificAmerican.com

AUTISM:
It's Different
in Girls
page 48

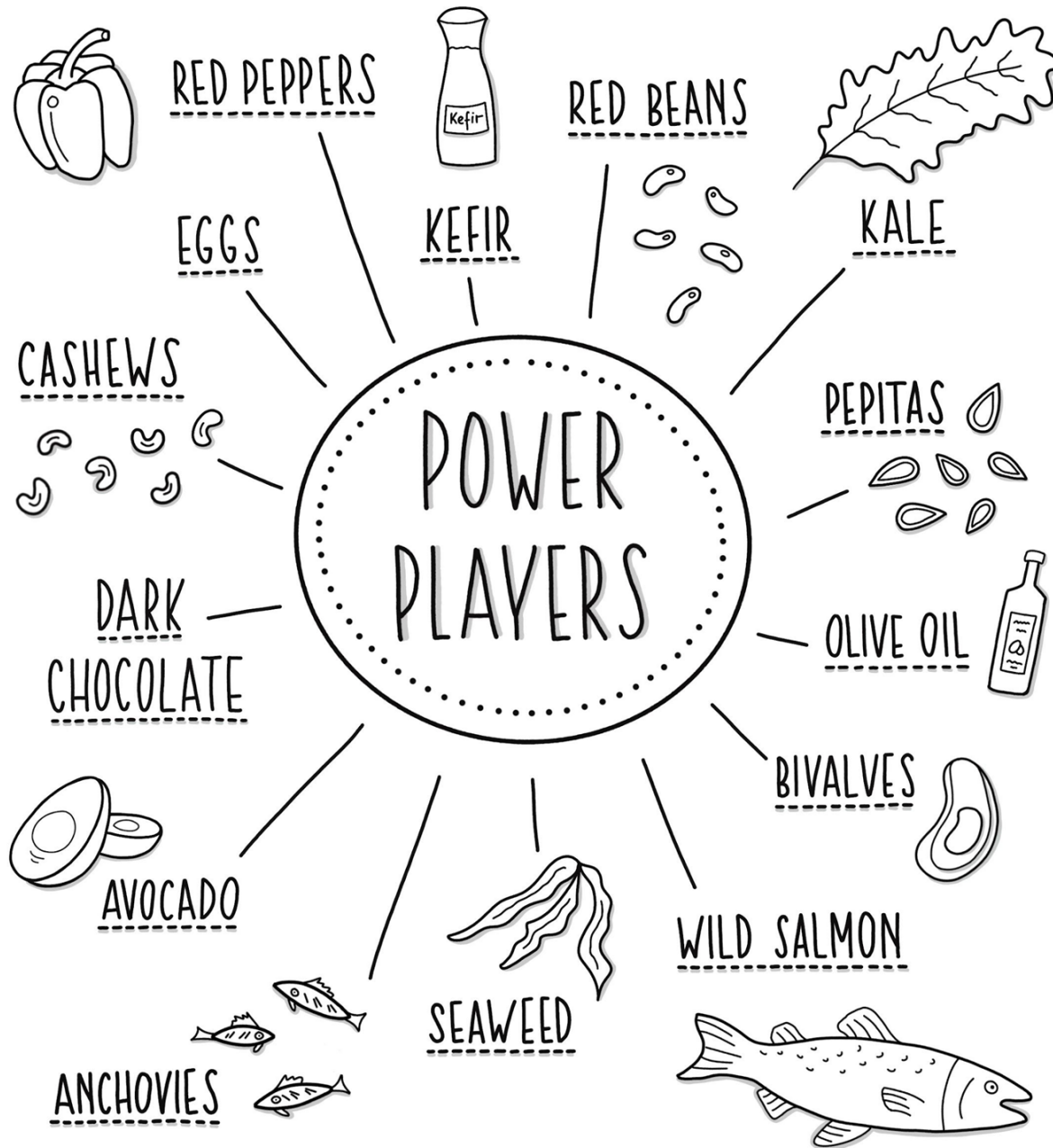
**THE
BEST
DIET
FOR
YOUR
BRAIN**

**Optimal Eating
to Stay Happy
and Sharp**



Reading between
the "Likes"
What Social Media
Reveals about Us

DREW RAMSEY 



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.

Personal View

THE LANCET Psychiatry

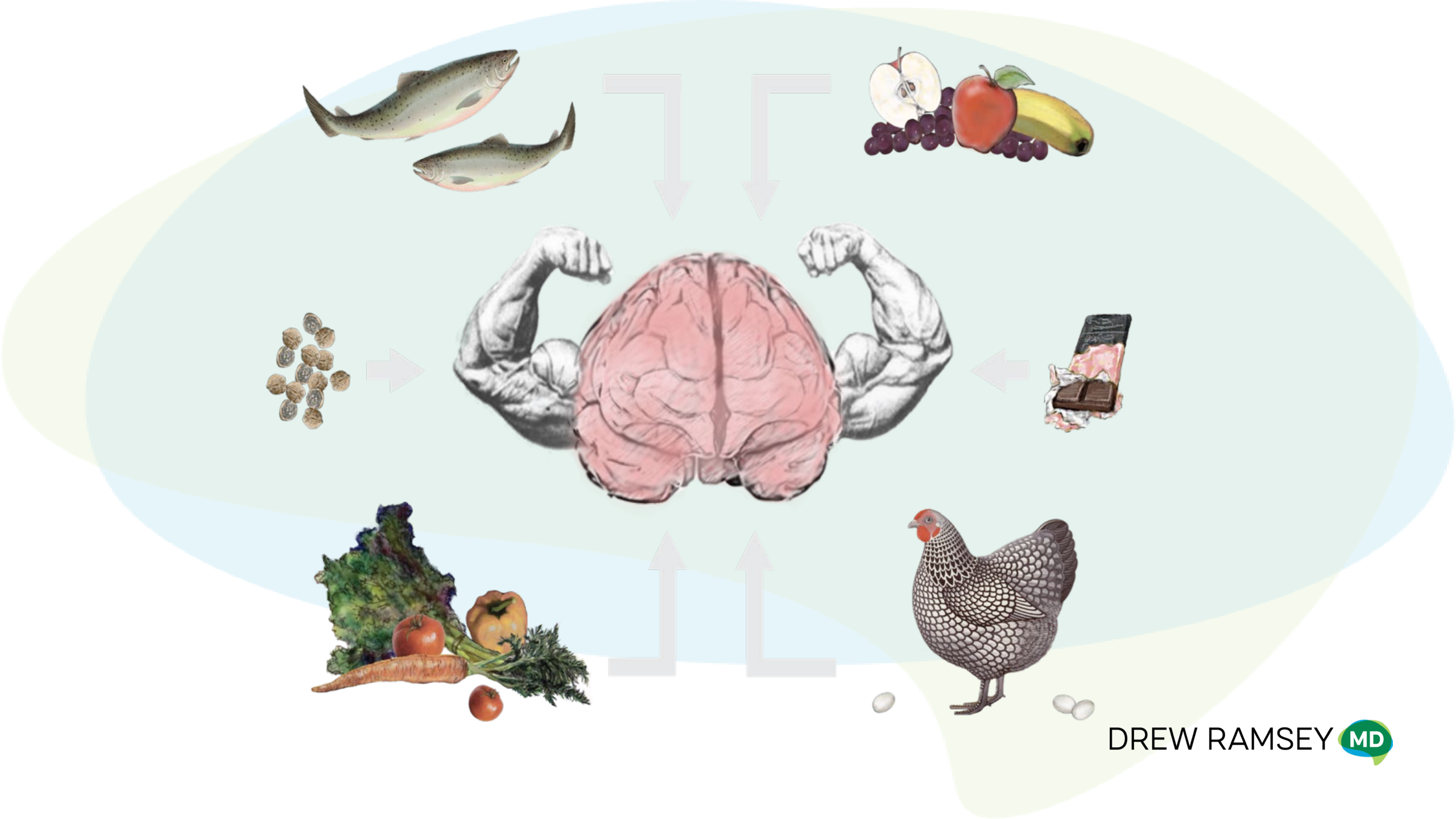
Nutritional medicine as mainstream in psychiatry

Jerome Sarris, Alan C Logan, Tasnime N Akbaraly, G Paul Amminger, Vicent Balanzá-Martínez, Marlene P Freeman, Joseph Hibbeln, Yutaka Matsuoka, David Mischoulon, Tetsuya Mizoue, Akiko Nanri, Daisuke Nishi, Drew Ramsey, Julia J Rucklidge, Almudena Sanchez-Villegas, Andrew Scholey, Kuan-Pin Su, Felice N Jacka, on behalf of The International Society for Nutritional Psychiatry Research

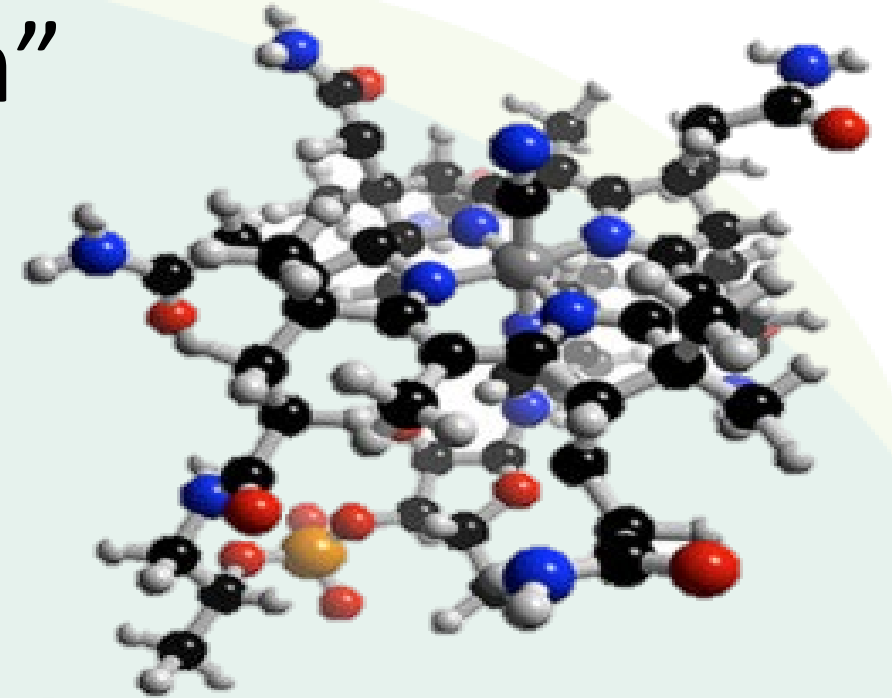


“Although the determinants of mental health are complex, the emerging and compelling evidence for nutrition as a crucial factor in the high prevalence and incidence of mental disorders suggests that diet is as important to psychiatry as it is to cardiology, endocrinology, and gastroenterology.”

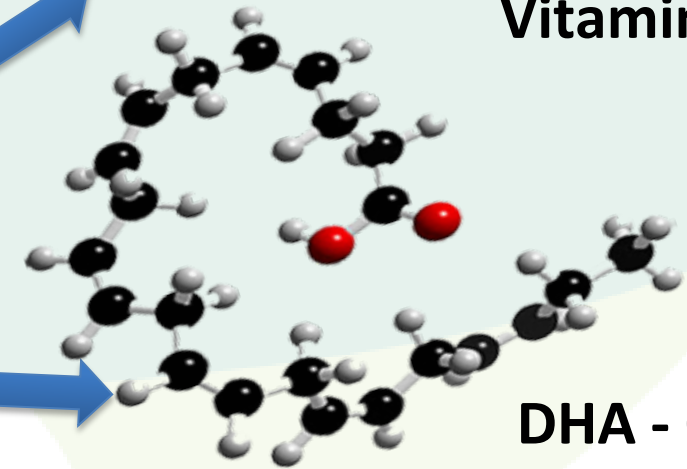
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“Nutritionism”



Vitamin B-12



DHA - Omega-3

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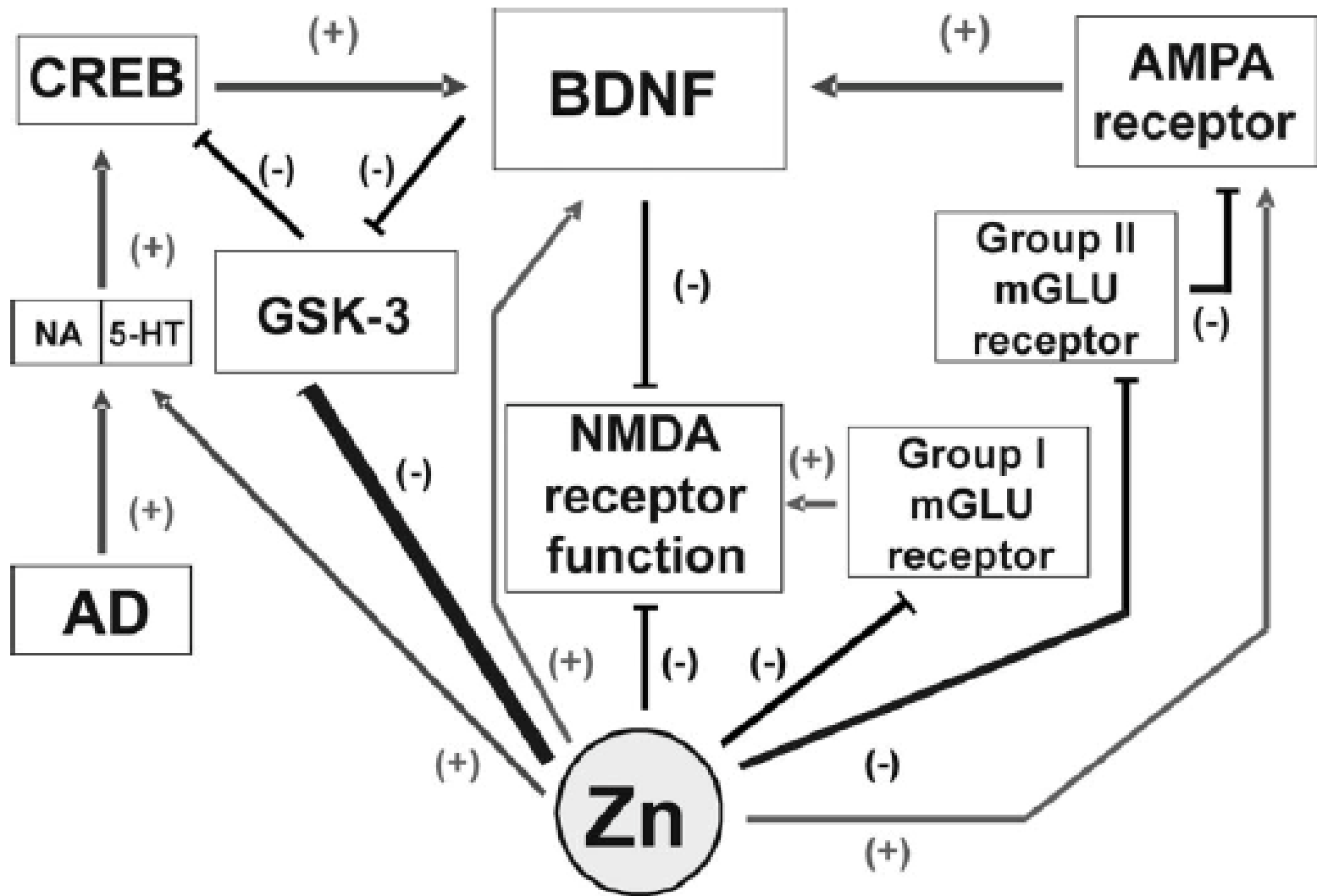
Brain-Derived Neurotrophic Factor (BDNF)

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

Everywhere!

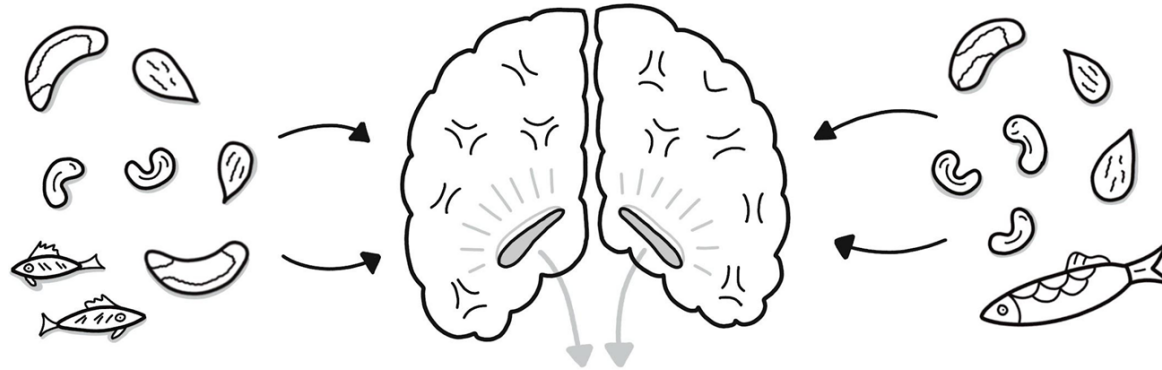
BRAIN GROW!





NEUROPLASTICITY

Your brain in **GROW** mode

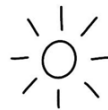


THE HIPPOCAMPUS

A healthy diet full of nutrients and omega-3s can make the hippocampus grow

⇒ this promotes:

- ▶ learning
- ▶ memory
- ▶ heightened mood



is the brain's memory center and it is also part of the human limbic, or emotional, system



Studies have found that this key region in the brain can shrink up to **20%** in patients struggling with depression

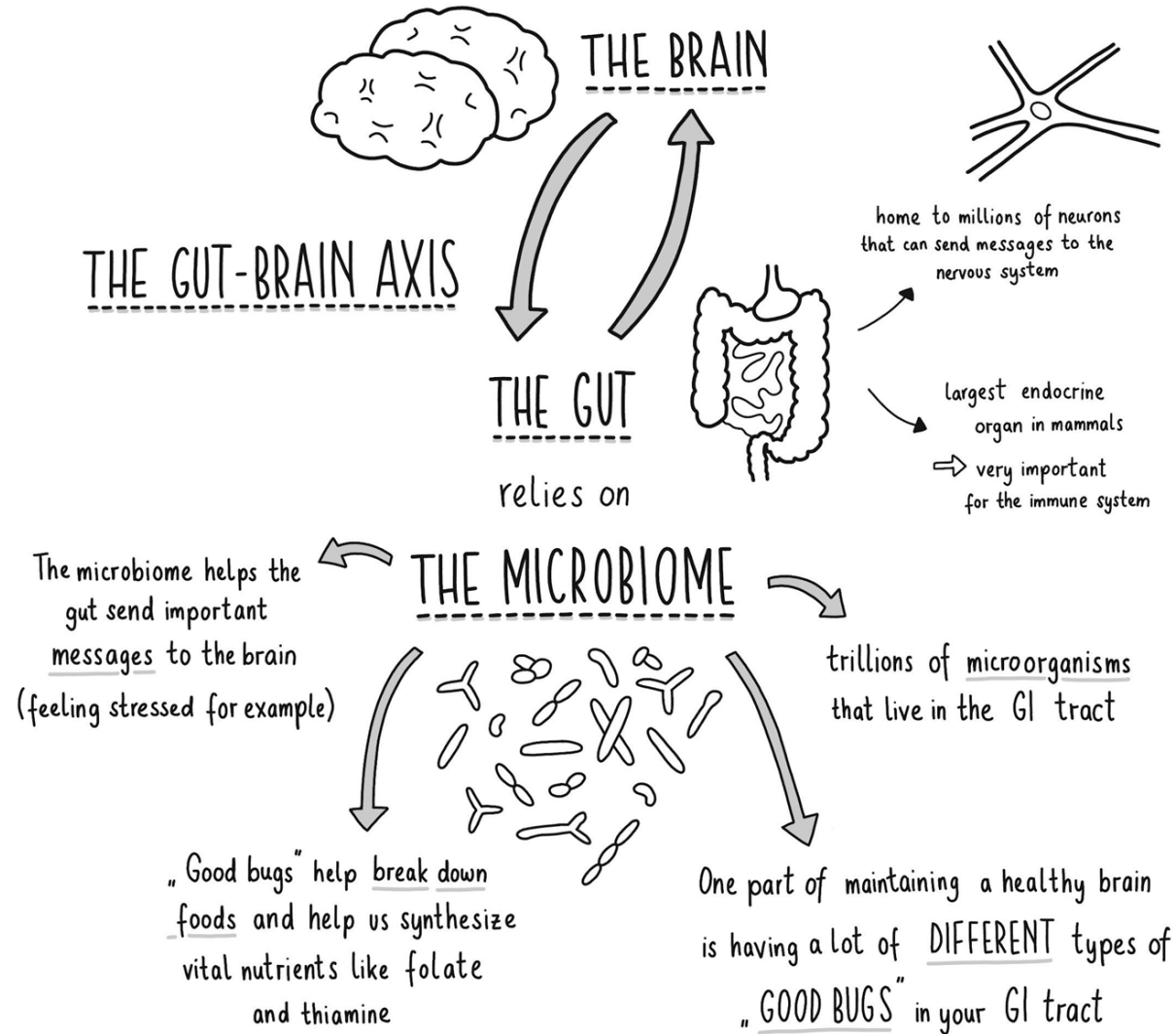
Neuroinflammation



CAUSES OF INFLAMMATION



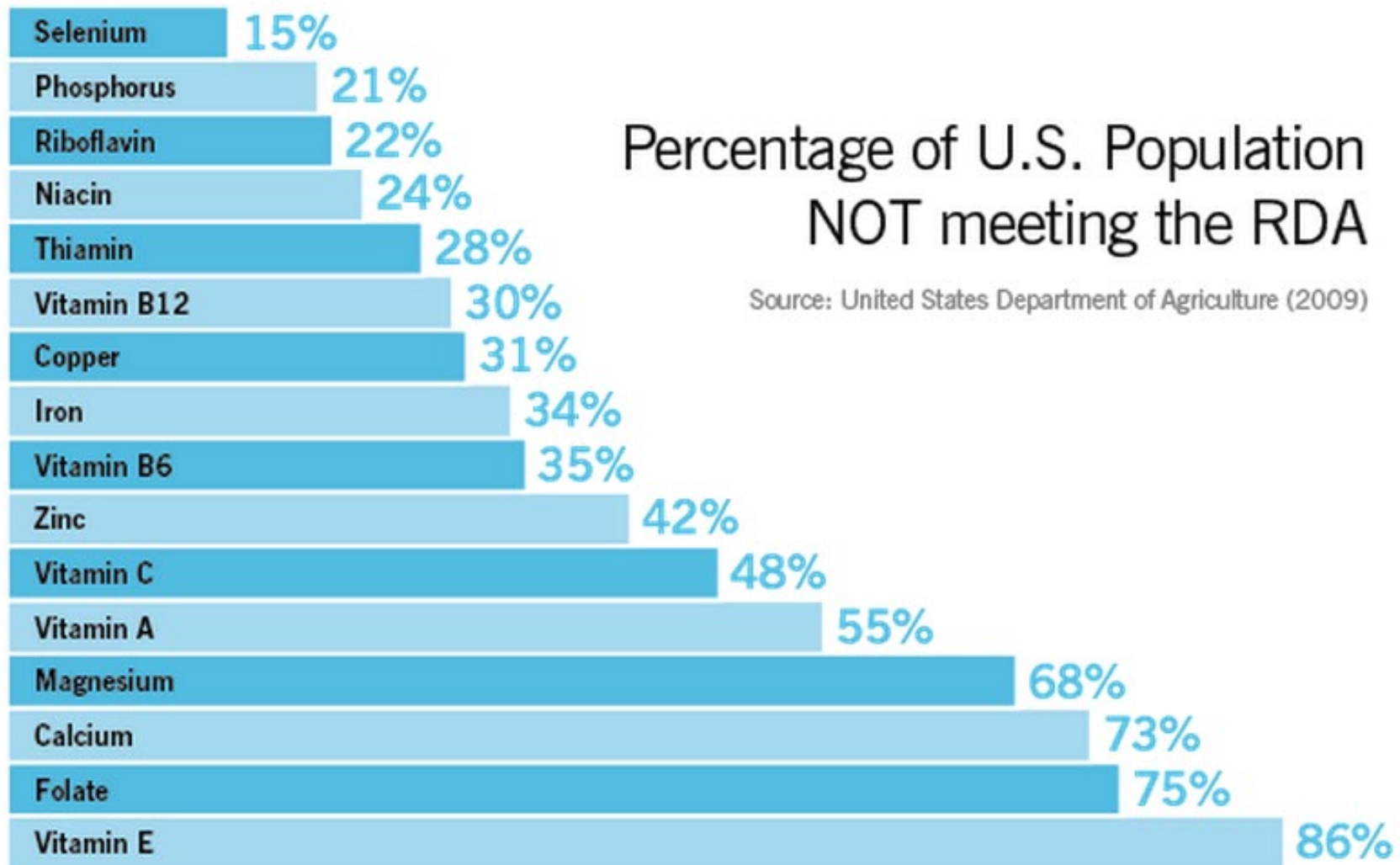
THE MICROBIOME



Dietary Change in last 100 years

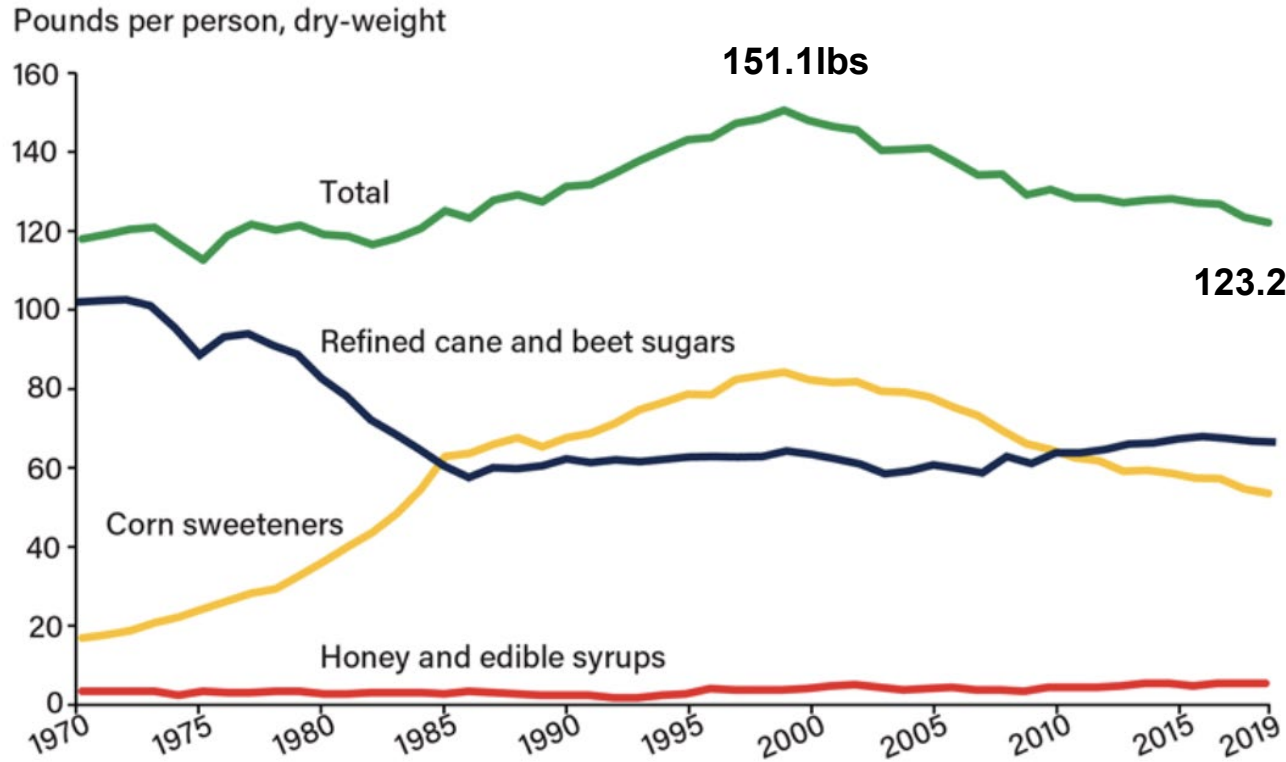


- Whole Food to Processed
- ↑ Sugar and Refined Carbs
- Animal to Vegetable Fats
- Omega-3 to Omega-6 fats?
- New Molecules: Food Dyes, Preservatives, Trans-fats



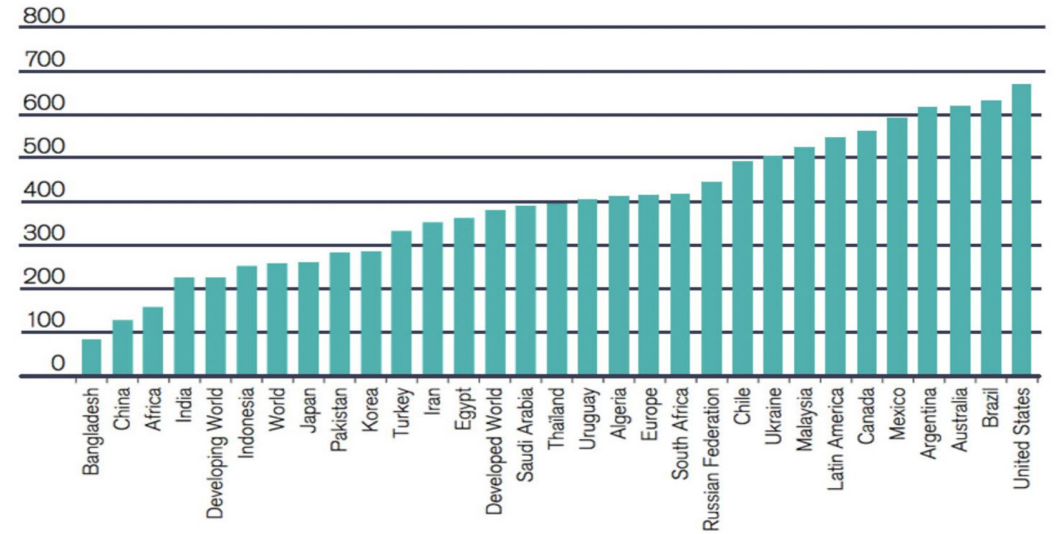
U.S. per capita caloric sweetener availability, 1970-2019

USDA Economic Research Service
U.S. DEPARTMENT OF AGRICULTURE

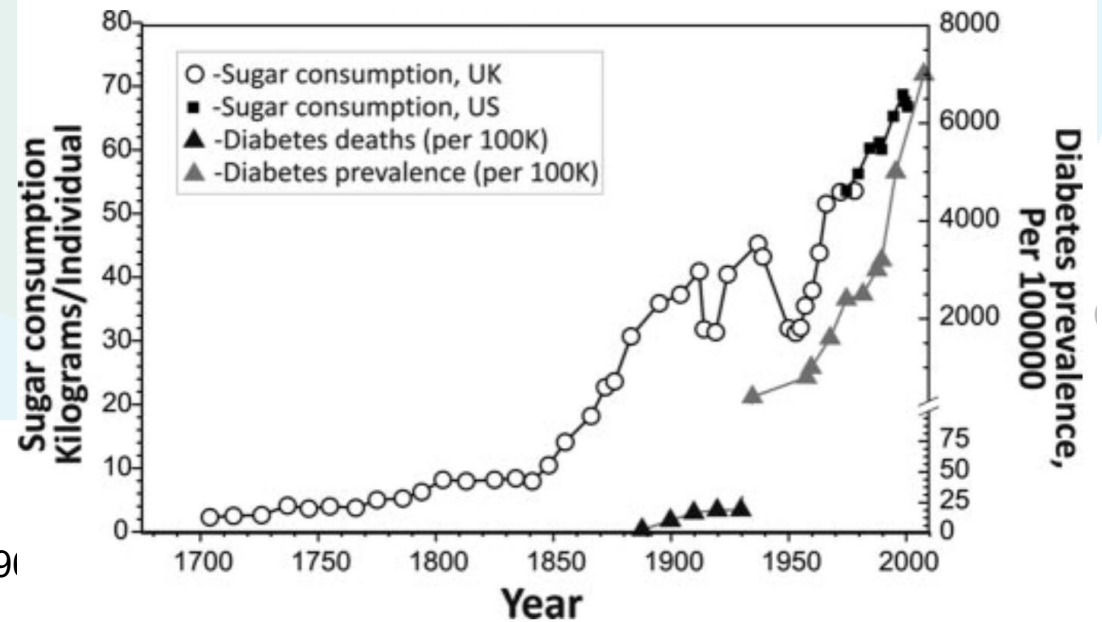


Johnson, Richard & Perez-Pozo et al. (2009). Hypothesis: Could Excessive Fructose Intake and Uric Acid Cause Type 2 Diabetes?. *Endocrine reviews*. 30. 91-116. 10.1210/er.2008-0033.

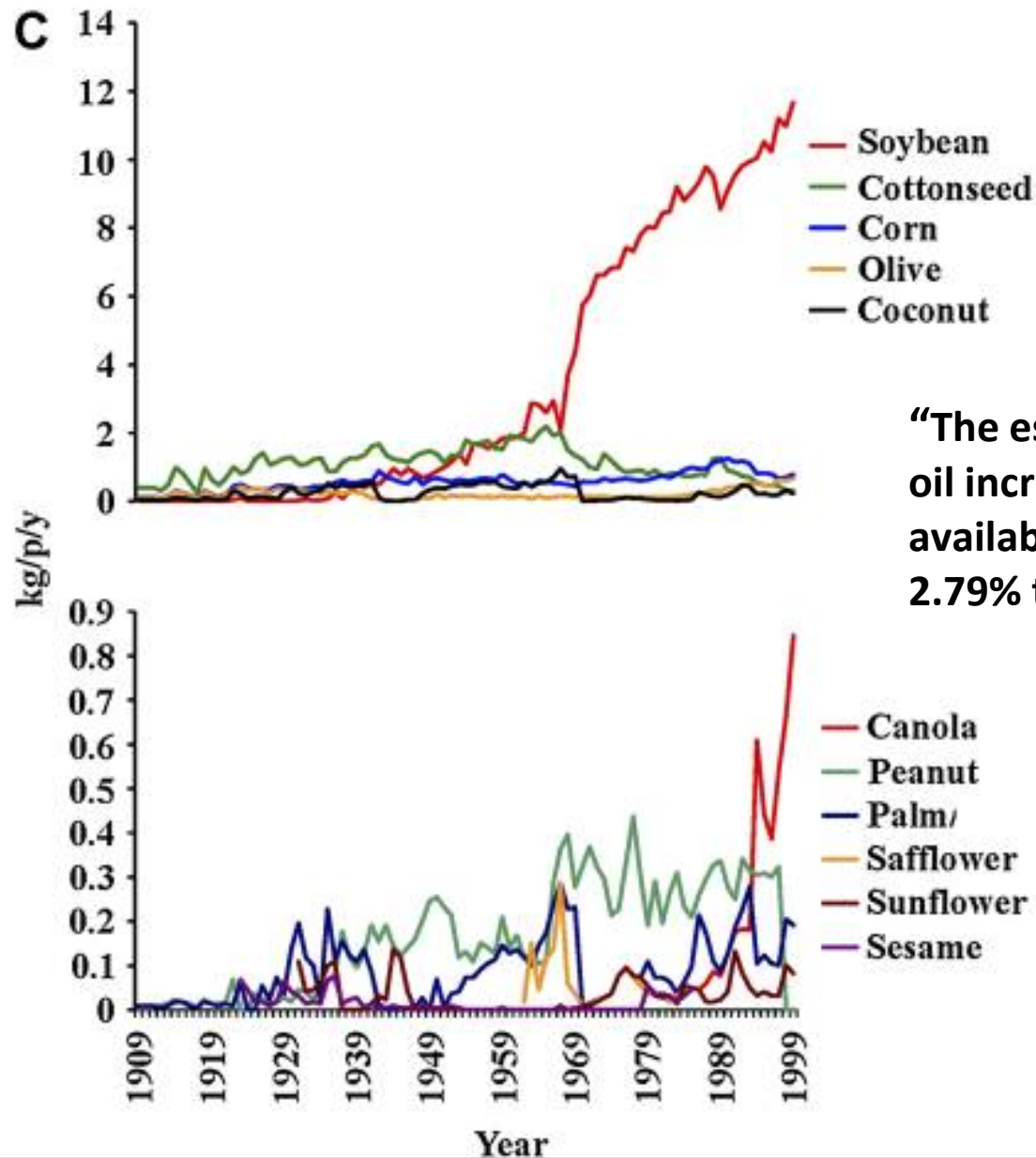
Caloric intake of sweeteners by country, per capita



Credit Suisse Research Institute. *Sugar Consumption at a Crossroads*. September 2013.



Small text at the bottom of the chart area, likely a reference or source note.



“The estimated per capita consumption of soybean oil increased >1000-fold from 1909 to 1999. The availability of linoleic acid (LA) increased from 2.79% to 7.21% of energy ($P < 0.000001$).”

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

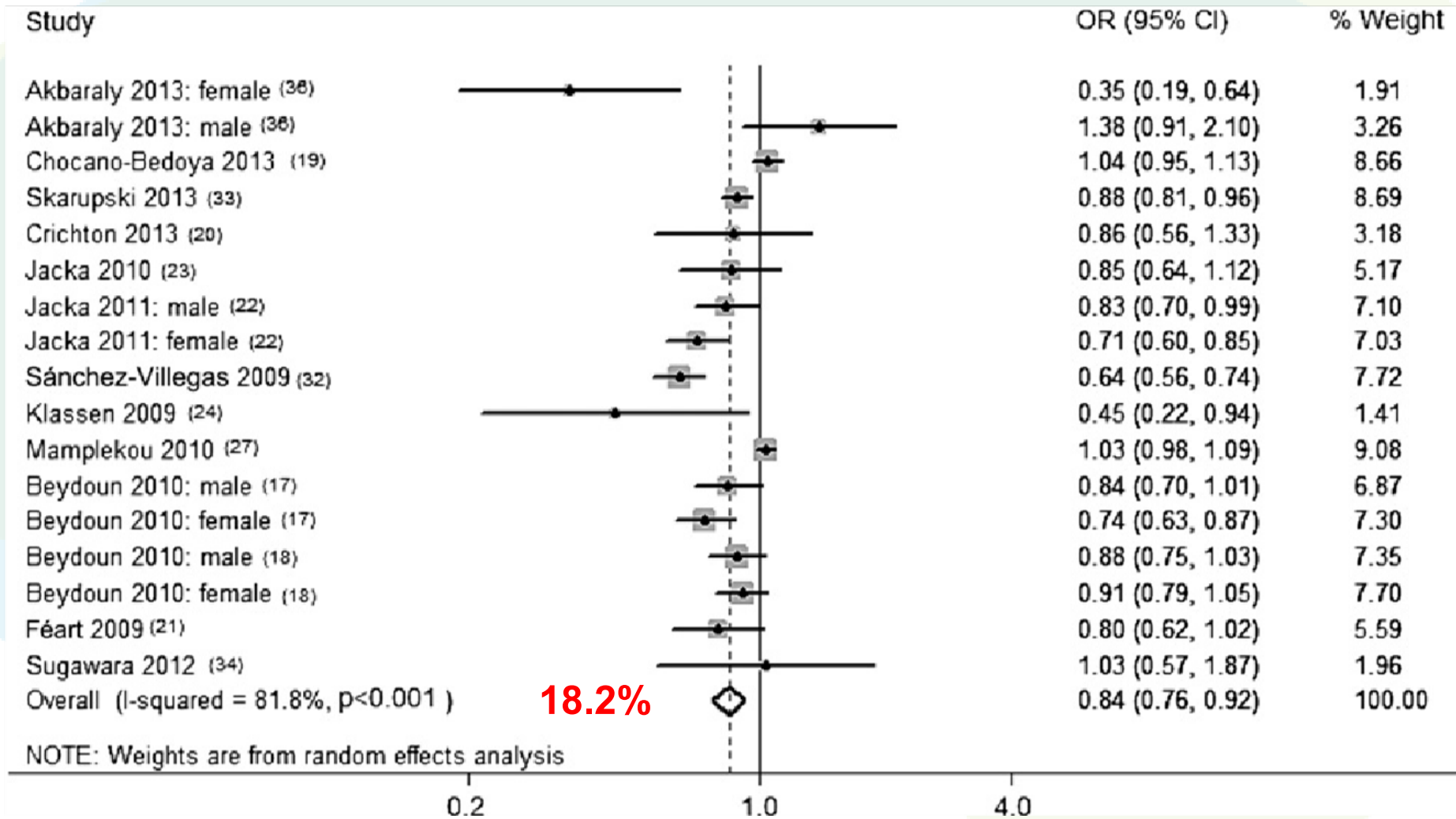
Variable	Adherence to the Mediterranean Dietary Pattern Score (Median Score)					P Value for Trend
	0-2 (2)	3 (3)	4 (4)	5 (5)	6-9 (6)	
No. of cases per person-years	126/8866	91/8253	97/9240	67/8131	99/9715	
Crude rates per 10 ³ (95% CI) ^a	14.2 (11.8-16.9)	11.0 (8.9-13.5)	10.5 (8.5-12.8)	8.2 (6.4-10.5)	10.2 (8.3-12.4)	
Model 1						
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	
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)	<.001
Model 3						
No. of cases per person-years	86/8726	65/8155	61/9116	50/8075	75/9631	
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)	.007

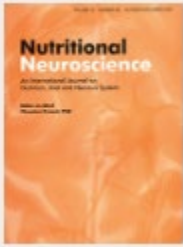
Model 1: sex, age, smoking status, BMI, physical activity, energy intake, employment

Model 2: Excluded Participants w/depression dx in first 2 years

Model 3: Excluded Participants with antidepressant on f/u, No DX

Does Dietary Pattern Influence Depression Risk?





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, commercial bakery goods, and sweets.

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Abstract

Background

Methods

Results

Discussion

Conclusions

Declarations

References

Research article | [Open Access](#) | [Open Peer Review](#)

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

Felice N. Jacka , 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

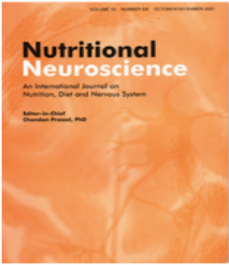
BMC Medicine 2017 **15**:23

<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).



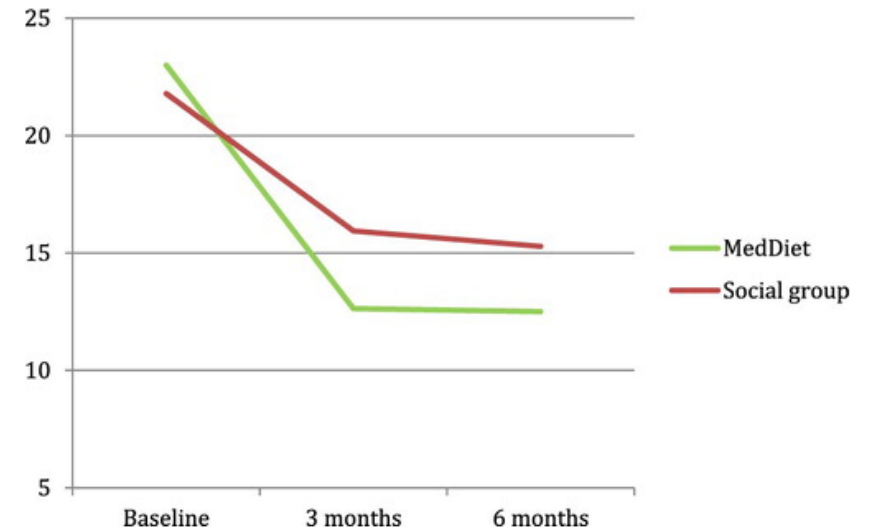
Nutritional Neuroscience
An International Journal on Nutrition, Diet and Nervous System

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.**

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 Symptoms: The MoodFOOD Randomized Clinical Trial

Mariska Bot, PhD¹; Ingeborg A. Brouwer, PhD²; Miquel Roca, PhD³; et al Elisabeth Kohls, PhD⁴; Brenda W. J. H. Penninx, PhD¹; Ed Watkins, PhD⁵; Gerard van Grootheest, MSc¹; Mieke Cabout, MSc²; Ulrich Hegerl, PhD⁴; Margalida Gili, PhD³; Matthew Owens, PhD⁵; Marjolijn Visser, PhD²; for the MoodFOOD Prevention Trial Investigators

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 strategies affected MDD onset.

Bot, M., Brouwer, I. A., Roca, M., Kohls, E., Penninx, B. W. J. H., Watkins, E., van Grootheest, G., Cabout, M., Hegerl, U., Gili, M., Owens, M., Visser, M., & MoodFOOD Prevention Trial Investigators (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 Symptoms: The MoodFOOD Randomized Clinical Trial. *JAMA*, 321(9), 858–868. <https://doi.org/10.1001/jama.2019.0556>

“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.”

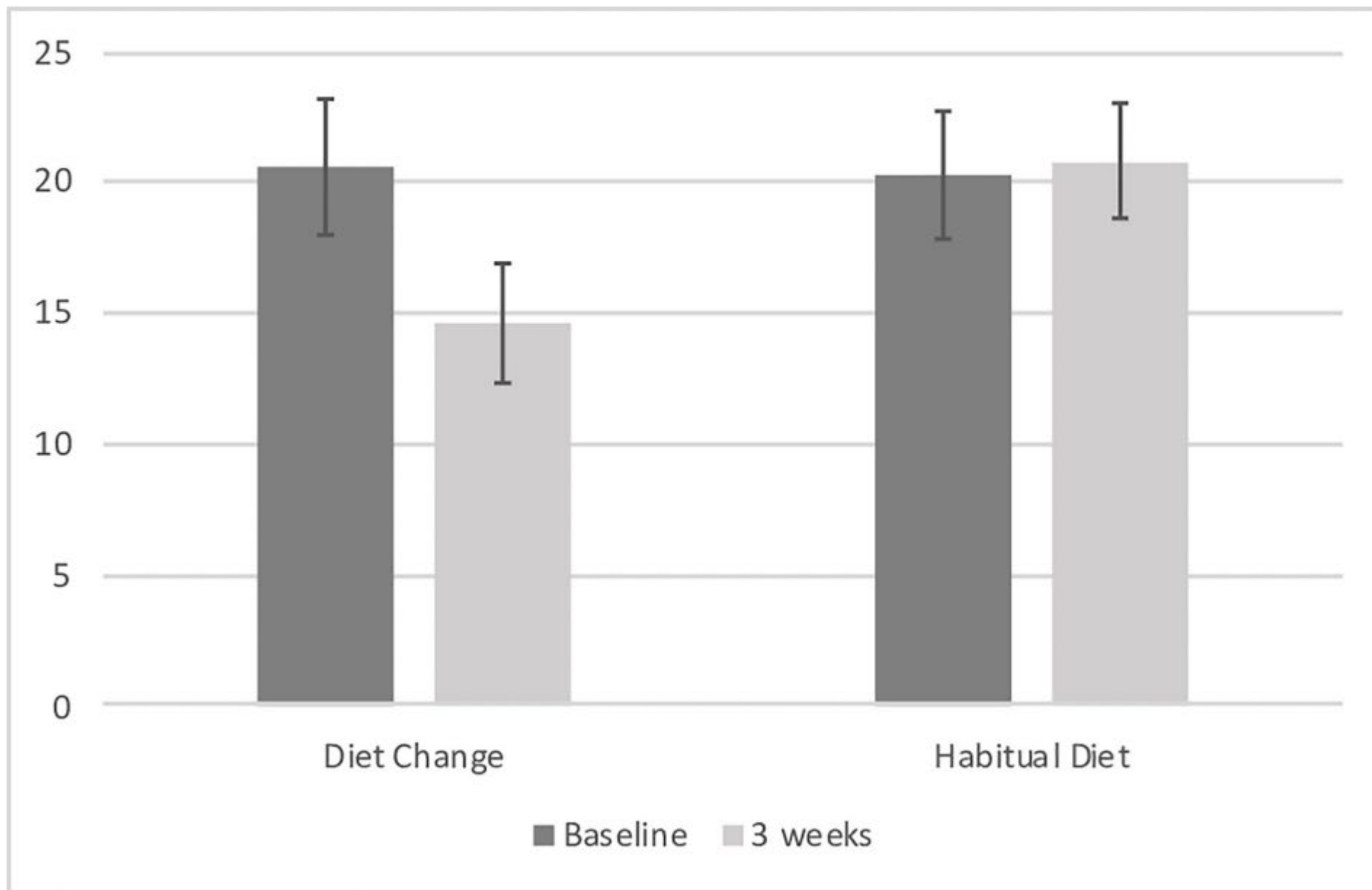
RESEARCH ARTICLE

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

Heather M. Francis ^{1*}, **Richard J. Stevenson**¹, **Jaime R. Chambers**^{2,3}, **Dolly Gupta**¹, **Brooklyn Newey**¹, **Chai K. Lim** ⁴

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

CES-D



Randomized Controlled Trial

> Am J Clin Nutr. 2022 Aug 4;116(2):572-580.

doi: 10.1093/ajcn/nqac106.

The effect of a Mediterranean diet on the symptoms of depression in young males (the "AMMEND: A Mediterranean Diet in MEN with Depression" study): a randomized controlled trial

Plants That They Like
Olive Oil - 3 Tablespoons
LEGUMES!

Jessica Bayes ¹, Janet Schloss ², David Sibbritt ¹

100% of men have decreased symptoms

36% of men reach full remission

8 point improvement MEDAS → 20 point decrease in BD-II

Large decrease in depression

Bayes, J., Schloss, J., & Sibbritt, D. (2022). The effect of a Mediterranean diet on the symptoms of depression in young males (the "AMMEND: A Mediterranean Diet in MEN with Depression" study): a randomized controlled trial. *The American journal of clinical nutrition*, 116(2), 572-580. <https://doi.org/10.1093/ajcn/nqac106>

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Mechanisms

1. Nutrient deficiency/Insufficiency
2. Neuroplasticity and BDNF
3. Inflammation
4. Microbiome
5. Plants and phytonutrients
6. Toxic Diet Effects – *trans*-fats, food dyes, increased medication load
7. Foodcebo Effect
8. Food Connection/Community
9. Empowerment/Self-Care



**Brain
Food Rx**

The Brain Food Clinic

Feed Your Mental Health

- What is a Brain Food?
- Nutrient Density
- Dietary Patterns
- Neuroplasticity
- FOOD not supplements

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

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“I Eat a Healthy Diet.....”

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



DAY 1



Breakfast

1 plain bagel



Lunch

Ham sandwich on a plain hero



Snack

1 package of freeze dried ice cream



Dinner

3 pulled pork tacos with corn salsa

DAY 2



Breakfast

3 scrambled eggs blueberry toast with avocado



Lunch

2 servings of penne arrabiata



Snack

2 cranberry & white chocolate cookies



Dinner

Roasted pork with corn & white rice

DAY 3



Breakfast

Scrambled egg whites with 2 English muffins



Lunch

1 slice of cheese pizza



Snack

Sour gummy candy



Dinner

Roasted pork & potatoes

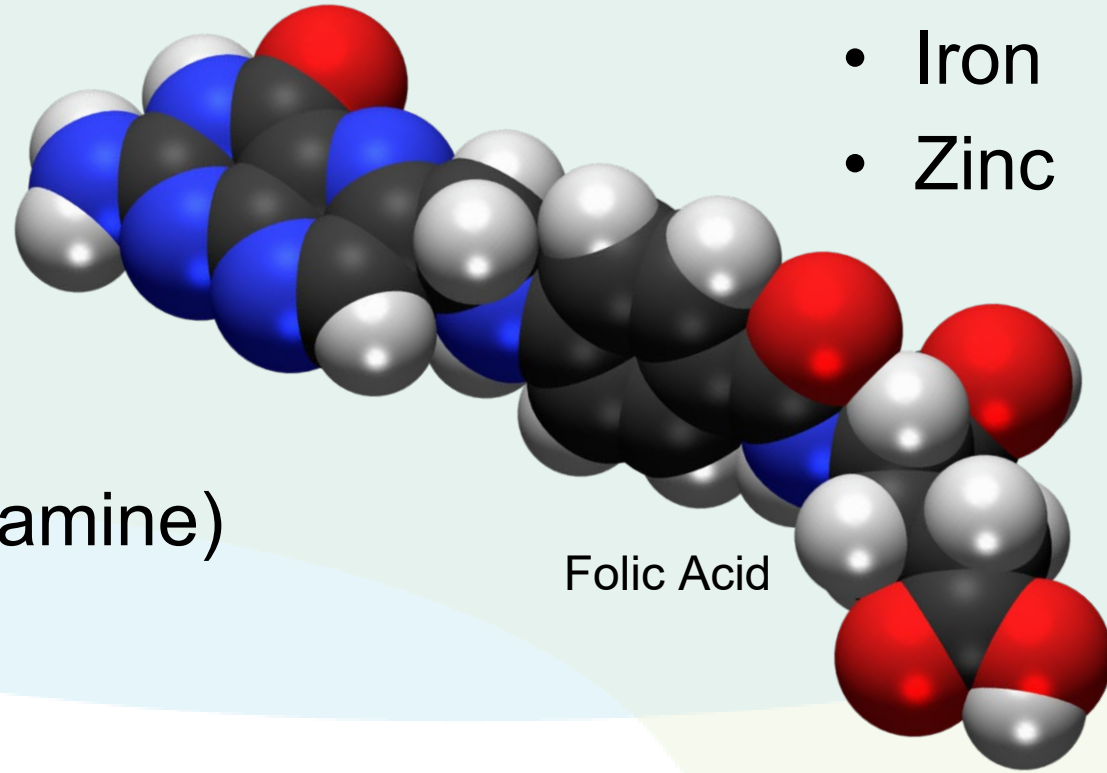
EAT TO BEAT DEPRESSION - SIMPLE SWAPS

<p>All-Fruit Smoothie ⇨</p> 	<p>Fruit, Veggie & Nut Smoothie</p> 	<p>French Fries ⇨</p> 	<p>Oven-baked sweet potato fries</p> 
<p>Muffin ⇨</p> 	<p>Whole grain muffin with nuts, seeds and berries</p> 	<p>Cheese Dip ⇨</p> 	<p>Guacamole</p> 
<p>Beef Burger ⇨</p> 	<p>Salmon Burger</p> 	<p>Ice Cream ⇨</p> 	<p>Banana ice cream or Greek yogurt with berries</p> 
<p>Chicken Burrito ⇨</p> 	<p>Fish Taco</p> 	<p>Soda ⇨</p> 	<p>Herbal tea, seltzer with lemon or lime, kombucha</p> 
<p>Steak & Potatoes ⇨</p> 	<p>Beef & Vegetable Stew</p> 	<p>Candy ⇨</p> 	<p>Dark chocolate, dried fruit</p> 
<p>Pasta w/Cream Sauce ⇨</p> 	<p>Spiralized zucchini with tomato sauce</p> 	<p>Potato chips ⇨</p> 	<p>Kale chips or crudité</p> 

photos © www.123rf.com

Brain Food Nutrients

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



- Choline
- Iron
- Zinc

W J P

World Journal of
Psychiatry

Submit a Manuscript: <http://www.lf6publishing.com>

World J Psychiatr 2018 September 20; 8(3): 1-11

DOI: 10.5498/wjp.v8.i3.1

ISSN 2220-3206 (online)

SYSTEMATIC REVIEW

Antidepressant foods: An evidence-based nutrient profiling system for depression

Laura R LaChance, Drew Ramsey



RESEARCH QUESTION

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

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The Antidepressant Food Scale

**B1 + B6 + B9 + B12 + LC-PUFA + Fe + Zn
+K + Mg + Vit A + Vit C + Selenium**

100 Calories









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

	<p>ZINC</p> <p>PUMPKIN SEEDS (¼ cup) 31%</p> <p>OYSTERS (6) 413%</p> <p>GROUND TURKEY (3 oz) 23%</p> <p>STEAK (5 oz) 175%</p> <p>SESAME SEEDS (¼ cup) 34%</p>		<p>MAGNESIUM</p> <p>ALMONDS (1 oz) 25%</p> <p>SPINACH (½ cup) 24%</p> <p>CASHEWS (1 oz) 23%</p> <p>BLACK BEANS (½ cup) 19%</p> <p>SOYBEANS (½ cup) 16%</p>
<p>B12</p> <p>CLAMS (3 oz) 1401%</p> <p>BEEF LIVER (3 oz) 1178%</p> <p>MUSSELS (3 oz) 833%</p> <p>SARDINES (3 oz) 338%</p> <p>CRAB (3 oz) 127%</p>		<p>FIBER</p> <p>NAVY BEANS (1 cup) 76%</p> <p>LENTILS (1 cup) 63%</p> <p>TEMPEH (1 cup) 48%</p> <p>RASPBERRIES (1 cup) 32%</p> <p>COLLARD GREENS (1 cup) 30%</p>	
	<p>IRON</p> <p>PUMPKIN SEEDS (¼ cup) 47%</p> <p>OYSTERS (3 oz) 44%</p> <p>DARK CHOCOLATE (3 oz) 39%</p> <p>SESAME SEEDS (¼ cup) 29%</p> <p>SPINACH (½ cup) 17%</p>		<p>OMEGA3s</p> <p>WILD SALMON (3 oz) 2172 mg</p> <p>ANCHOVIES (3 oz) 1776 mg</p> <p>SARDINES (3 oz) 1242 mg</p> <p>TUNA (3 oz) 808 mg</p> <p>OYSTERS (3 oz) 511 mg</p>
<p>GOOD BUGS</p> <p>The number of healthy bacteria in a fermented food is quantified by CFUs (colony forming units). All these foods are rich in live cultures.</p> <p>KEFIR SAUERKRAUT YOGURT KOMBUCHA KIMCHI</p>		<p>PHYTONUTRIENTS</p> <p>RED PEPPERS: Lycopene</p> <p>SWEET POTATO: Carotenoids</p> <p>BROCCOLI: Sulforaphanes</p> <p>BLUEBERRIES: Anthocyanins</p> <p>ONIONS: Quercetin</p>	

photos © www.123rf.com

Top Iron Foods (per 100 grams)



28mg (155%)



23 mg (129%)



6.1mg (34%)



15mg (83%)



17mg (97%)

DREW RAMSEY 

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 either high 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.***

To Improve a Memory, Consider Chocolate



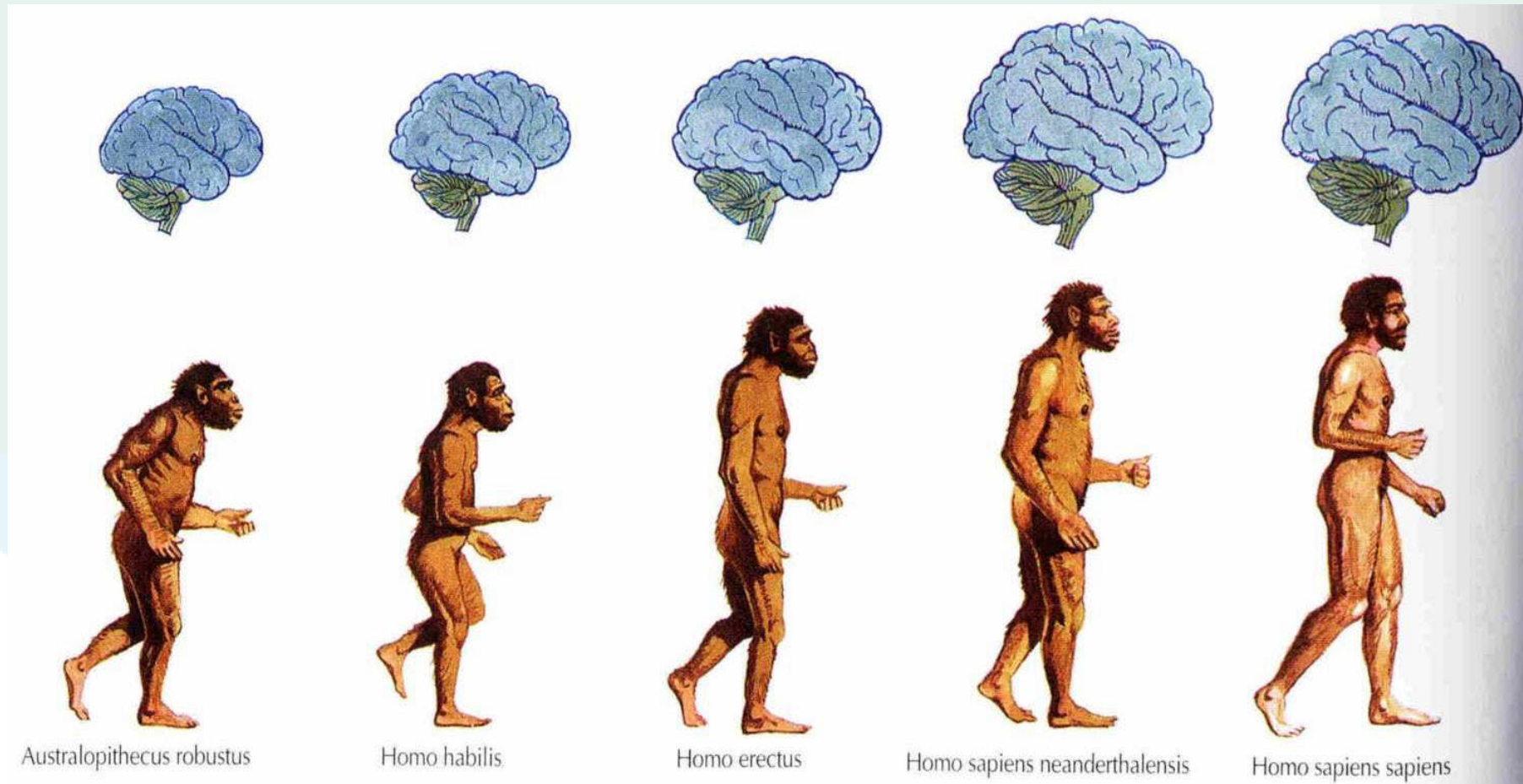
Cocoa flavanol extracted from fresh cocoa beans. Mars, Incorporated

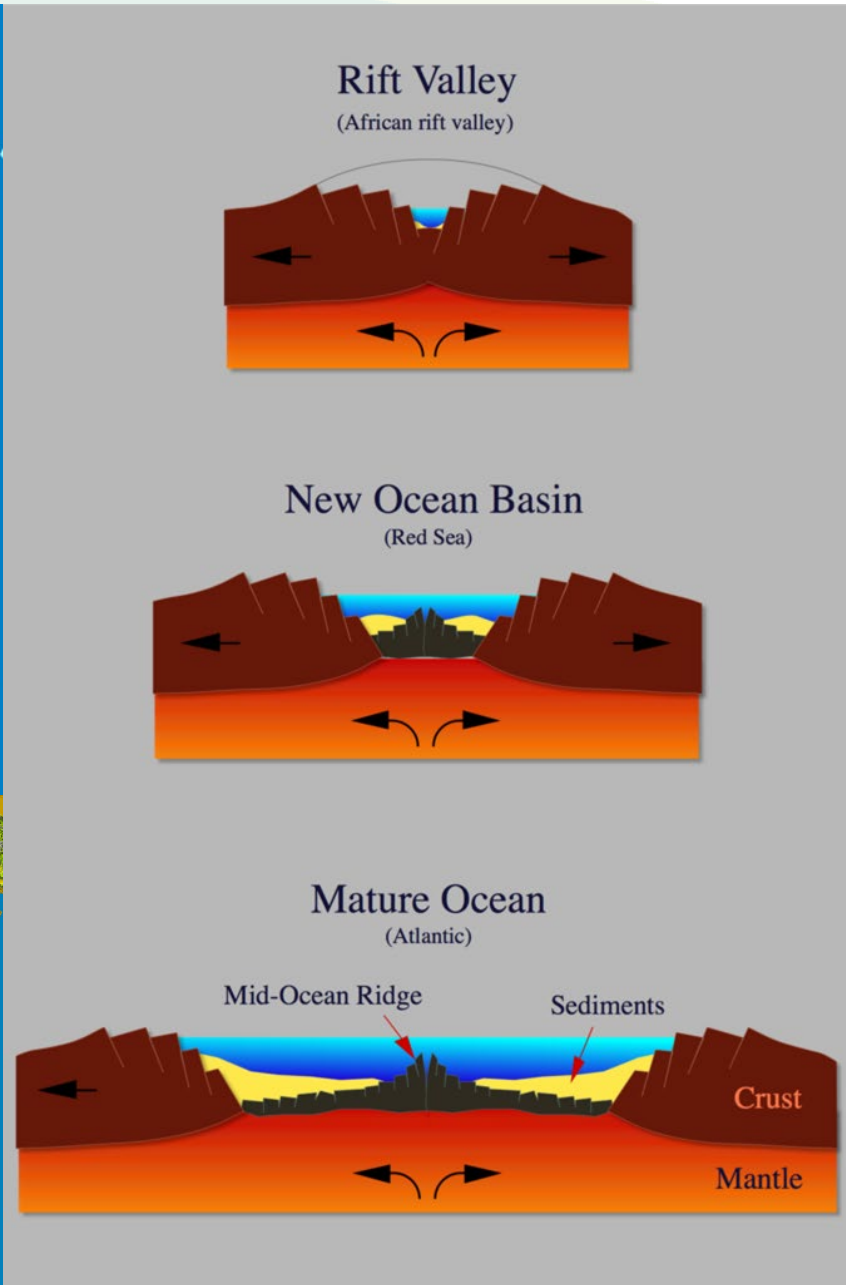
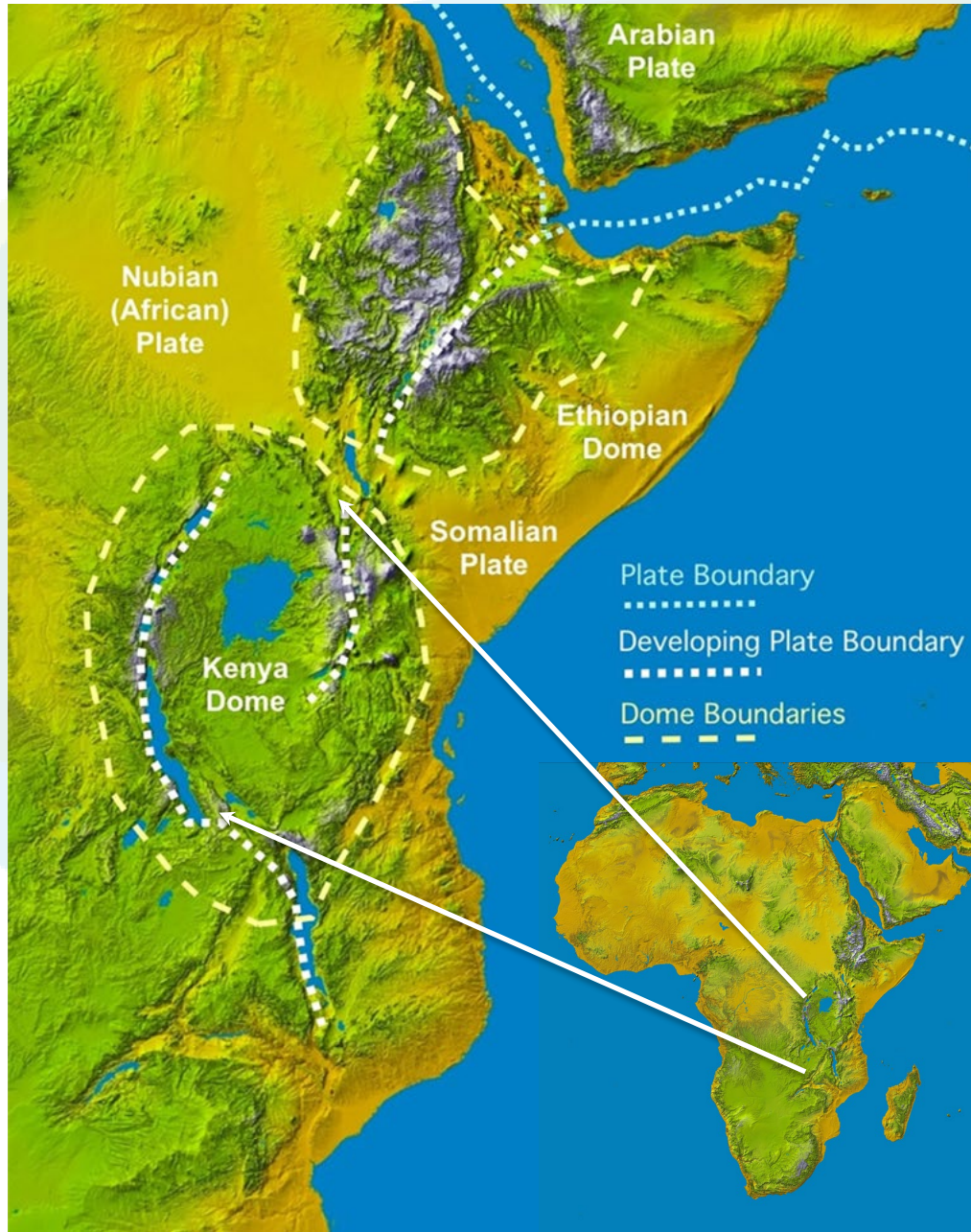
By Pam Belluck

Oct. 26, 2014



Survival of the Fattest



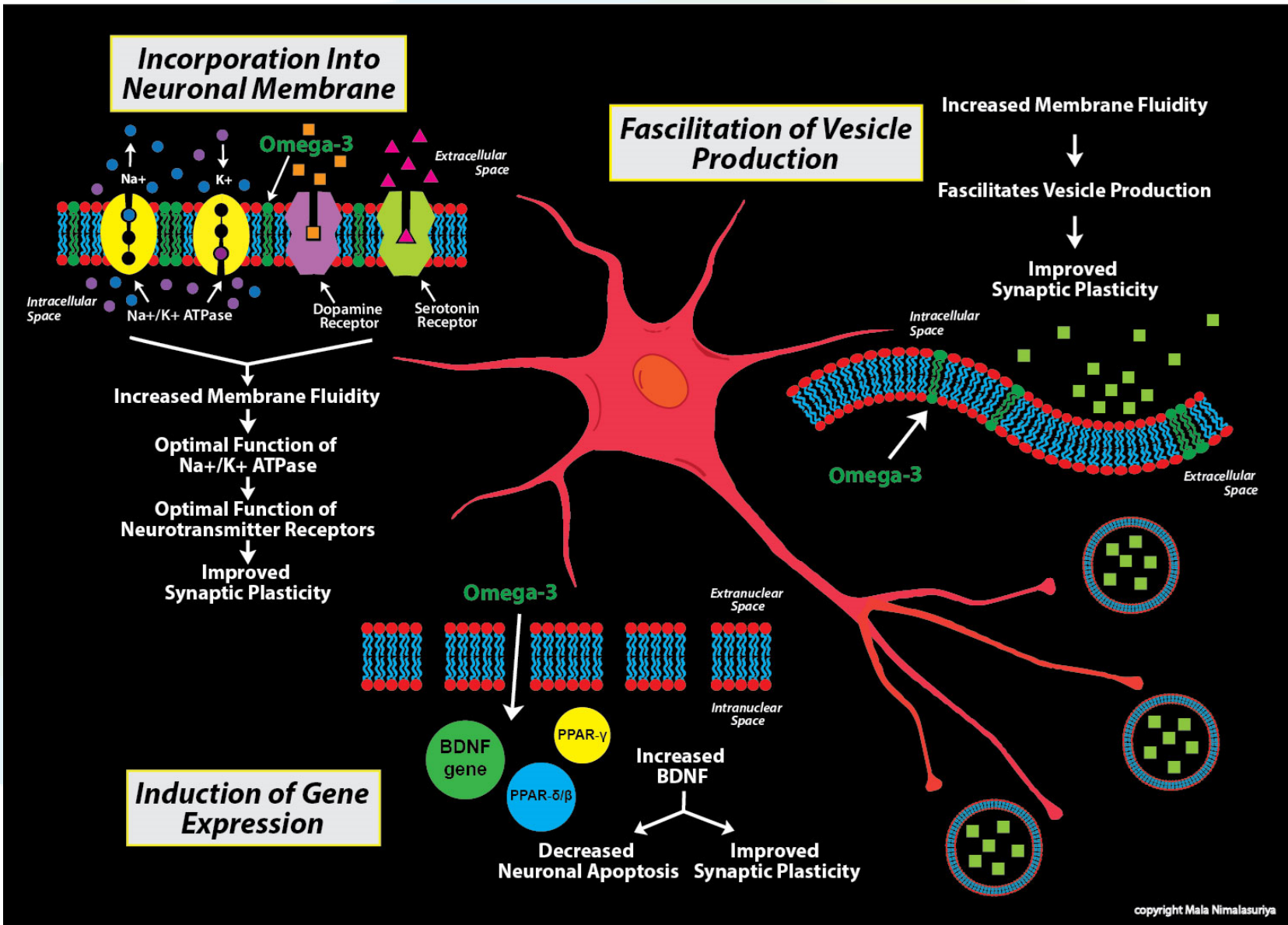


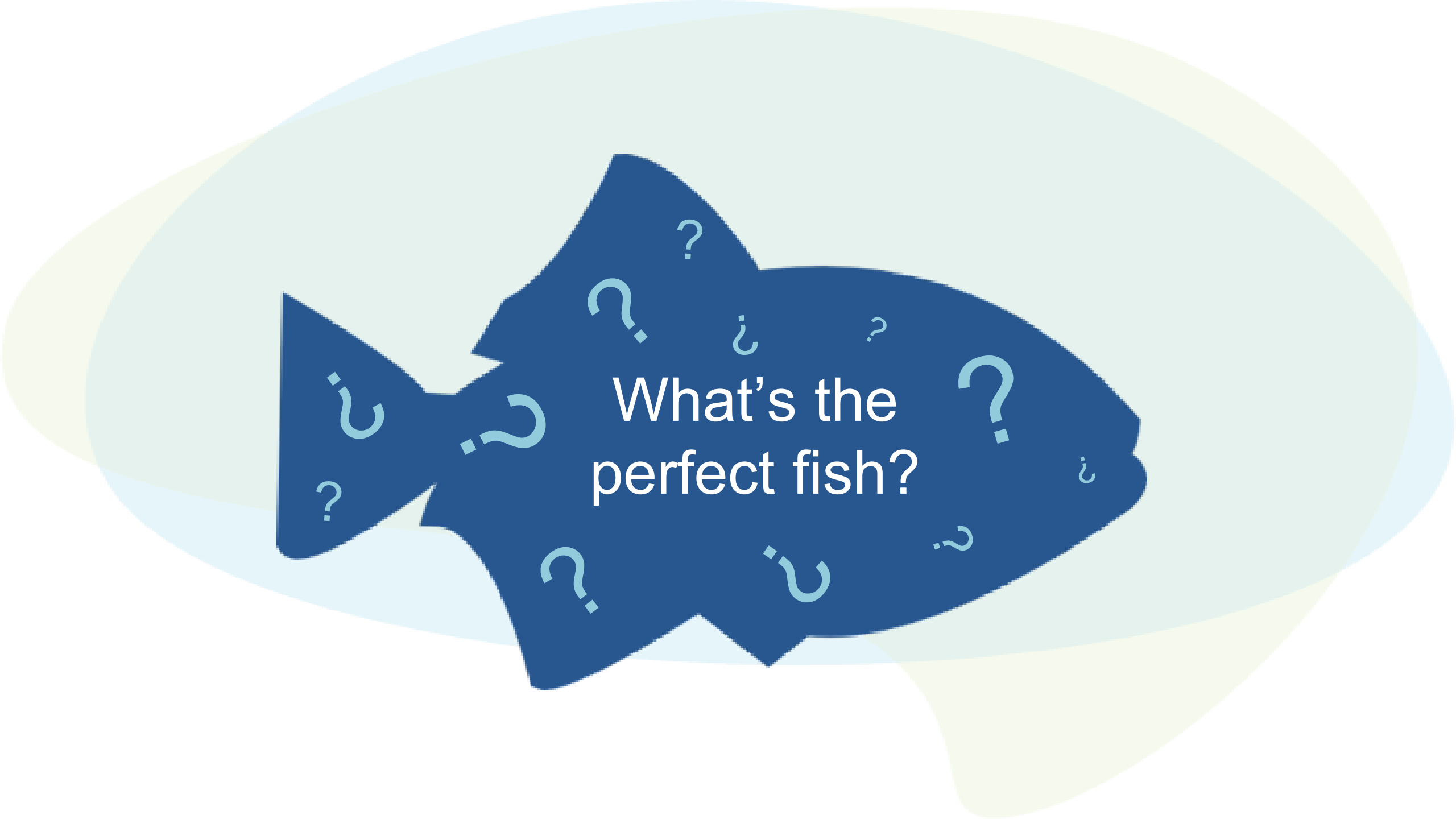


6 Oysters

Zinc	509%
Iron	31%
B12	245%
Selenium	76%
LC-Omega-3	565mg

Seafood





What's the
perfect fish?

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	2700 – 3500	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

THREE DAY SALE
APRIL 18-20

Wild-Caught
**Coho
Salmon
Fillet**

Product of USA
Previously frozen

SAVE
\$8

\$9⁹⁹
LB

*No rain checks. While supplies last.

Reg. 17.99 lb



Photo by
Ellen Silverman

DREW RAMSEY  MD



Kale



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

The background of the entire slide is a dense field of almonds. A semi-transparent dark blue box is overlaid on the right side, containing text. A white banner is at the bottom.

23 Almonds 162 Kcals

25% off!

Vitamin E	37%
Manganese	37%
Magnesium	20%
Protein	6 grams

Nuts & Seeds



1 Cup Lentils = 230 cals

Folate 90%

Fiber 67%

Iron 37%

Protein 18 grams

Beans & Legumes



Photo by
Ellen Silverman

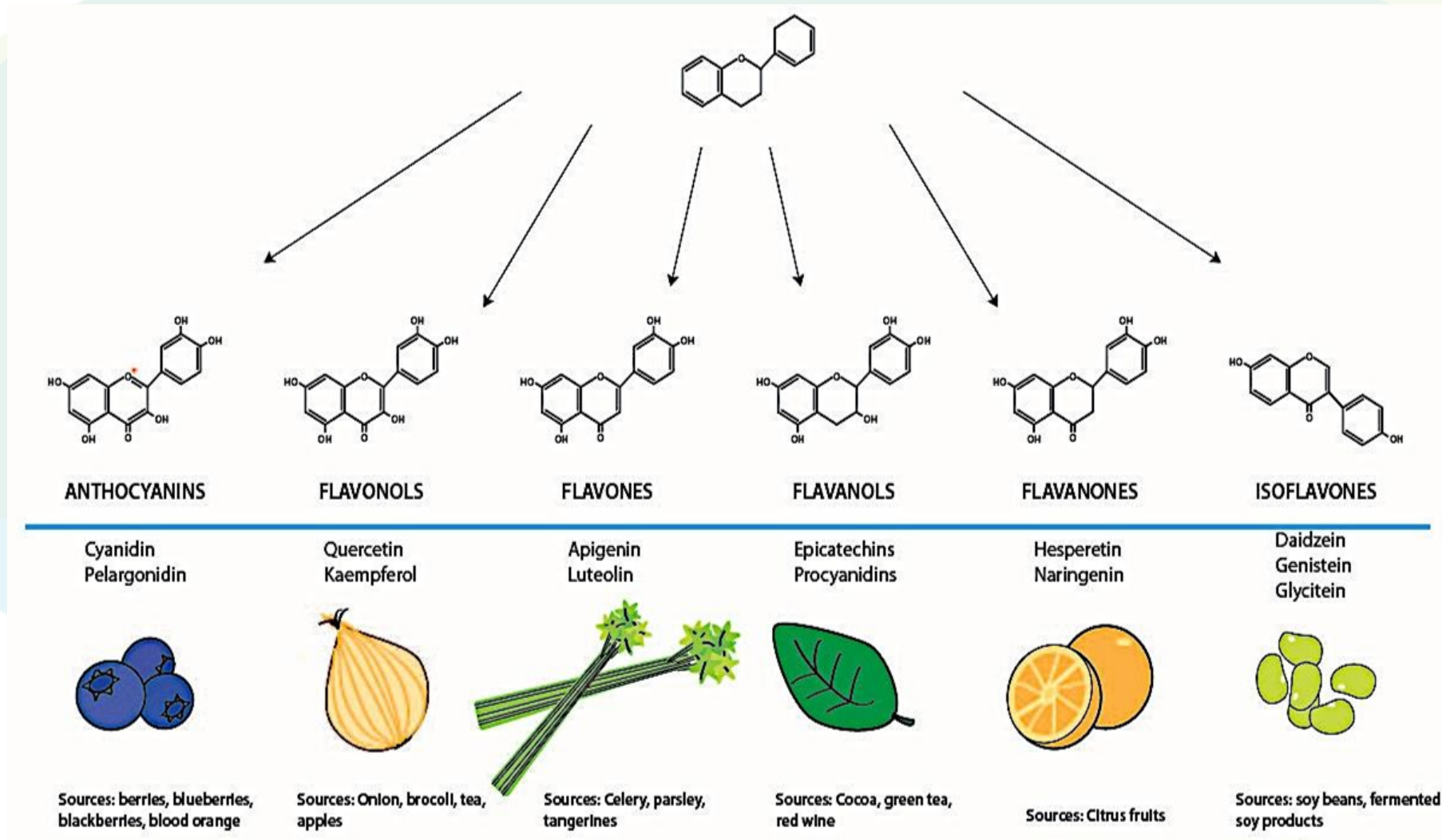
DREW RAMSEY 



Photo by
Ellen Silverman

DREW RAMSEY 

The Flavonoids



Rainbow Colors = Phytonutrients

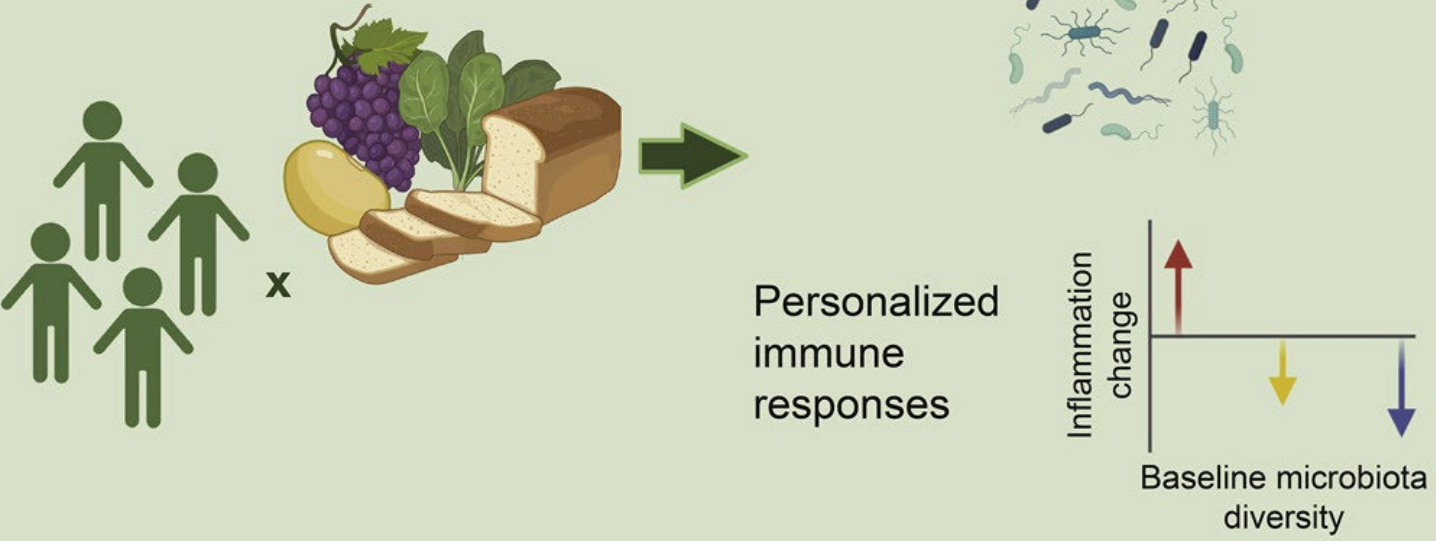






Six Servings
Per Day?!

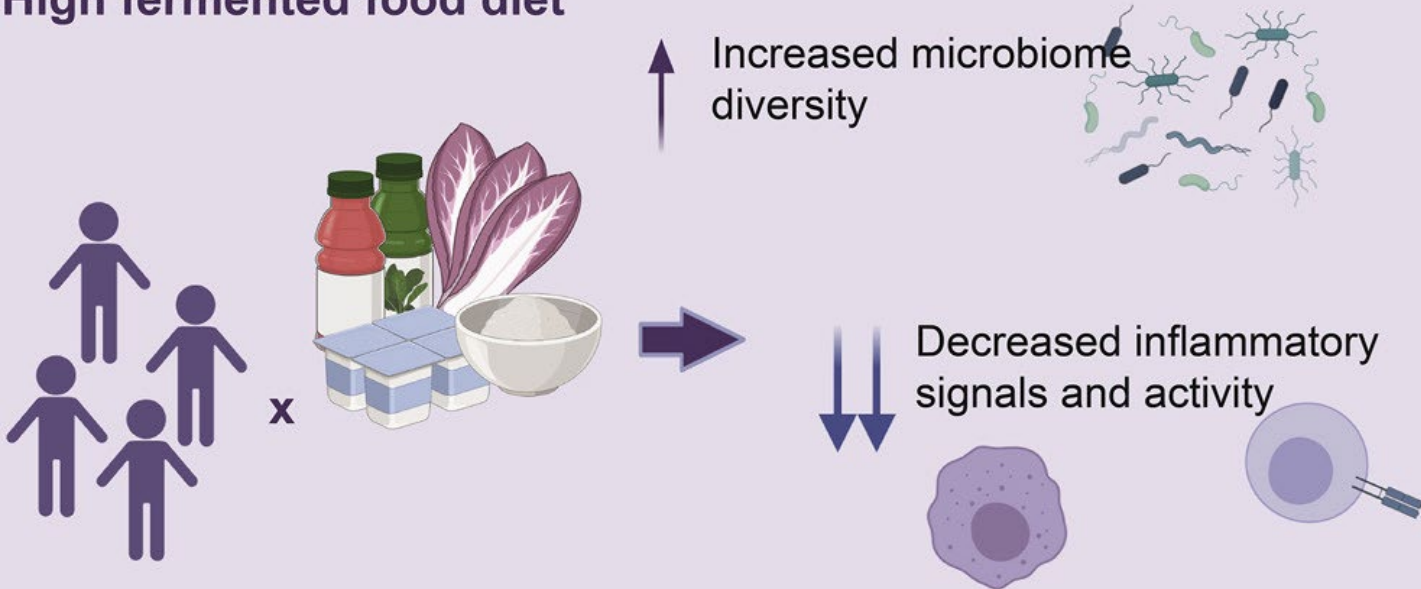
High fiber diet



Gut-microbiota-targeted diets modulate human immune status

Hannah C. Wastyk ⁷ • Gabriela K. Fragiadakis ⁷ • Dalia Perelman ⁷

High fermented food diet



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.

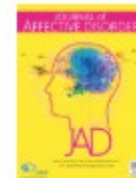
[Liu RT](#)¹, [Walsh RFL](#)², [Sheehan AE](#)².



ELSEVIER

Journal of Affective Disorders

Volume 228, 1 March 2018, Pages 13-19



Review article

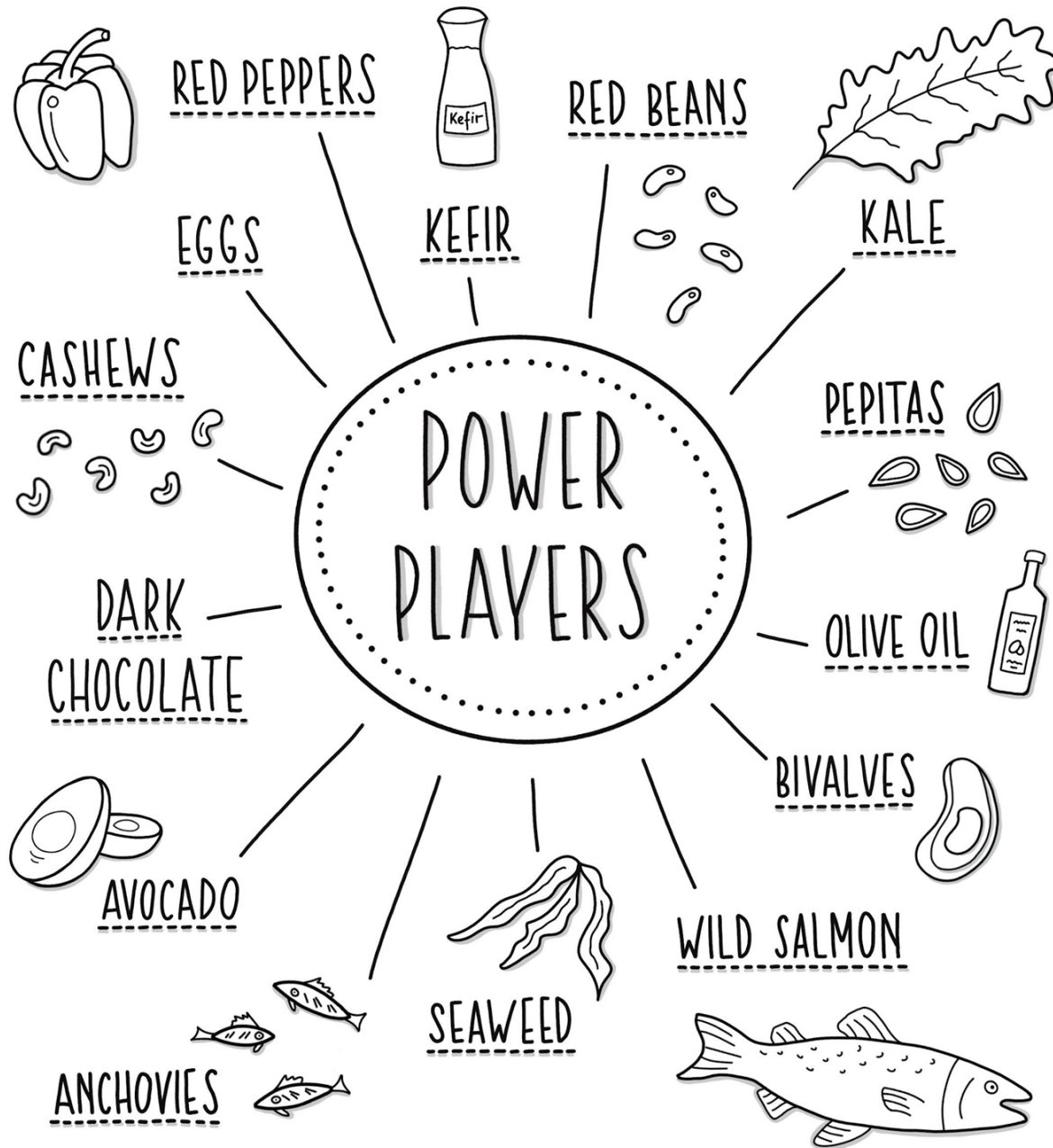
A meta-analysis of the use of probiotics to alleviate depressive symptoms

[Qin Xiang Ng](#)^a  , [Christina Peters](#)^b, [Collin Yih Xian Ho](#)^c, [Donovan Yutong Lim](#)^d, [Wee-Song Yeo](#)^{c, e}

DREW RAMSEY 

The Pharmacy







HEALING THE MODERN BRAIN



Friday Feels

with DREW RAMSEY MD



7 Surprising Foods that Fight Depression and Anxiety

DREW RAMSEY MD

MENTAL FITNESS KITCHEN

DREW RAMSEY MD

The Mental Fitness Kitchen gives people tools to support their mental health while fostering community. We know the impact that food can have on our wellbeing and have seen from numerous studies that learning these hands-on skills and putting them into practice in a connection with one another can greatly impact mental health, and can reduce symptoms of depression. When we get together in the kitchen and cook, it is nourishing on multiple levels.

[Click to learn more](#)



Brain Food on a Budget

DREW RAMSEY MD



DREW RAMSEY MD

Can you eat to grow a better brain?

- BRAIN GROW!
- Dietary pattern and Nutrient Density
- Neuroplasticity and Inflammation
- Colors – Fats – Fun
- Don't be scared of fish! Remember Clams!
- Whole Foods, “Traditional” or Medi
Protective for Depression, Anxiety,
ADHD & Dementia?
- Learn from History

Put the Genie Back in the Bottle

DREW RAMSEY 

Ramsey Big 5 Nutritional Psychiatry

Self-Assessment (RB5NP-S)

1. Besides a salad, I eat greens as _____.
 2. My three favorite fiber foods?
 3. I love to dip _____ in olive oil.
 4. My Seafood meals this week will be _____.
 5. This week I have eaten _____ CFUs.
- Bonus: As an eater, I feel too much guilt about _____
and not enough JOY about _____.

Feed Your Mental Health!

The Brain Food Clinic

New **Healing The Modern Brain** ecourse

Nutritional Psychiatry Clinician Training

DrewRamseyMD.com

[@DrewRamseyMD](https://twitter.com/DrewRamseyMD)