

A collage of fresh produce including bok choy, artichokes, pomegranates, and lemons. The background is a light gray with a semi-transparent dark gray overlay containing the text.

BARBIE BOULES
THE COGNITION DIETITIAN

THE MIND DIET

NOURISH YOUR NEURONS & IMPROVE COGNITIVE FITNESS



BARBIE BOULES, RDN

REGISTERED DIETITIAN

specializing in optimal brain & metabolic health
for women in the menopause transition

OUR TIME TODAY

INTRODUCTION TO THE MIND DIET

KEY NUTRIENTS

THE ELEMENTS

SPECIAL MENTIONS

BE MINDFUL

BRAIN-LOVING DIETARY PATTERN



THE MIND DIET

MEDITERRANEAN-DASH
INTERVENTION FOR
NEURODEGENERATIVE
DELAY



THE ORIGIN

Research published in 2015 “MIND diet slows cognitive decline with aging.”

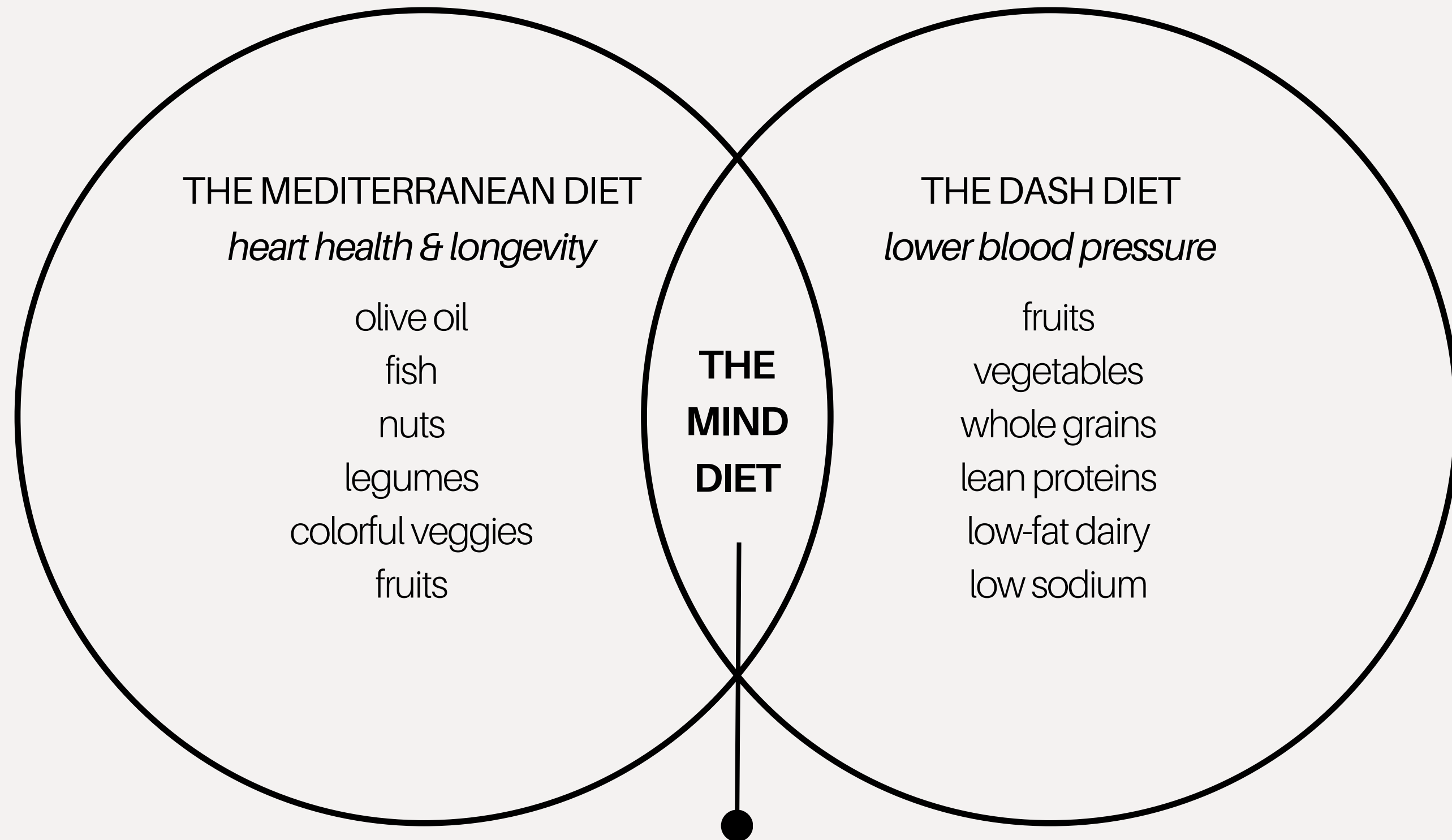
Dr. Martha Clare Morris and her team

Rush University Chicago - *Rush Memory & Aging Project*

Goal: to create a dietary pattern targeting cognitive decline with foods that specifically benefit brain structure & chemical function, using the Mediterranean and DASH diets as a foundation

923 older adults over 4.5 years

- Close adherence = 53% lower risk of AD
- Moderate adherence = 35% lower risk of AD
- Highest adherence = rate of cognitive decline equal to 7.5 years younger



Mediterranean-Dash Intervention for Neurodegenerative Delay

cognitive health

leafy greens | berries | whole grains | beans | nuts | fatty fish | olive oil

THE MEDITERRANEAN DIET

PLANT FORWARD
AMPLE LEAN PROTEIN
LOW SATURATED FAT
LOW ADDED SUGAR
LOW SODIUM

IMPROVED:.

cholesterol & triglycerides
glucose & A1C
blood pressure
cognition
bone & muscle mass
telomere health

REDUCED RISK:

metabolic syndrome
insulin resistance & T2DM
vascular & Alzheimer's dementia
cancer
cardiovascular disease
osteoporosis & sarcopenia

THE EVOLUTION OF THE MIND DIET

2015

fatty fish: 1 serving / week

berries

fiber-rich foods

leafy greens: 6 servings / week

nuts: 3 servings / week

whole grains daily

limit ultra-processed foods

less than 1 glass of wine / day



2025

fatty fish: 2 to 3 servings / week

broader spectrum of polyphenol-rich foods

more specifically prebiotic fibers + probiotic foods

leafy greens + cruciferous veggies

a variety of both nuts & seeds

greater emphasis on fiber-rich choices

minimize as much as possible

minimize or eliminate, especially APOE4 carriers

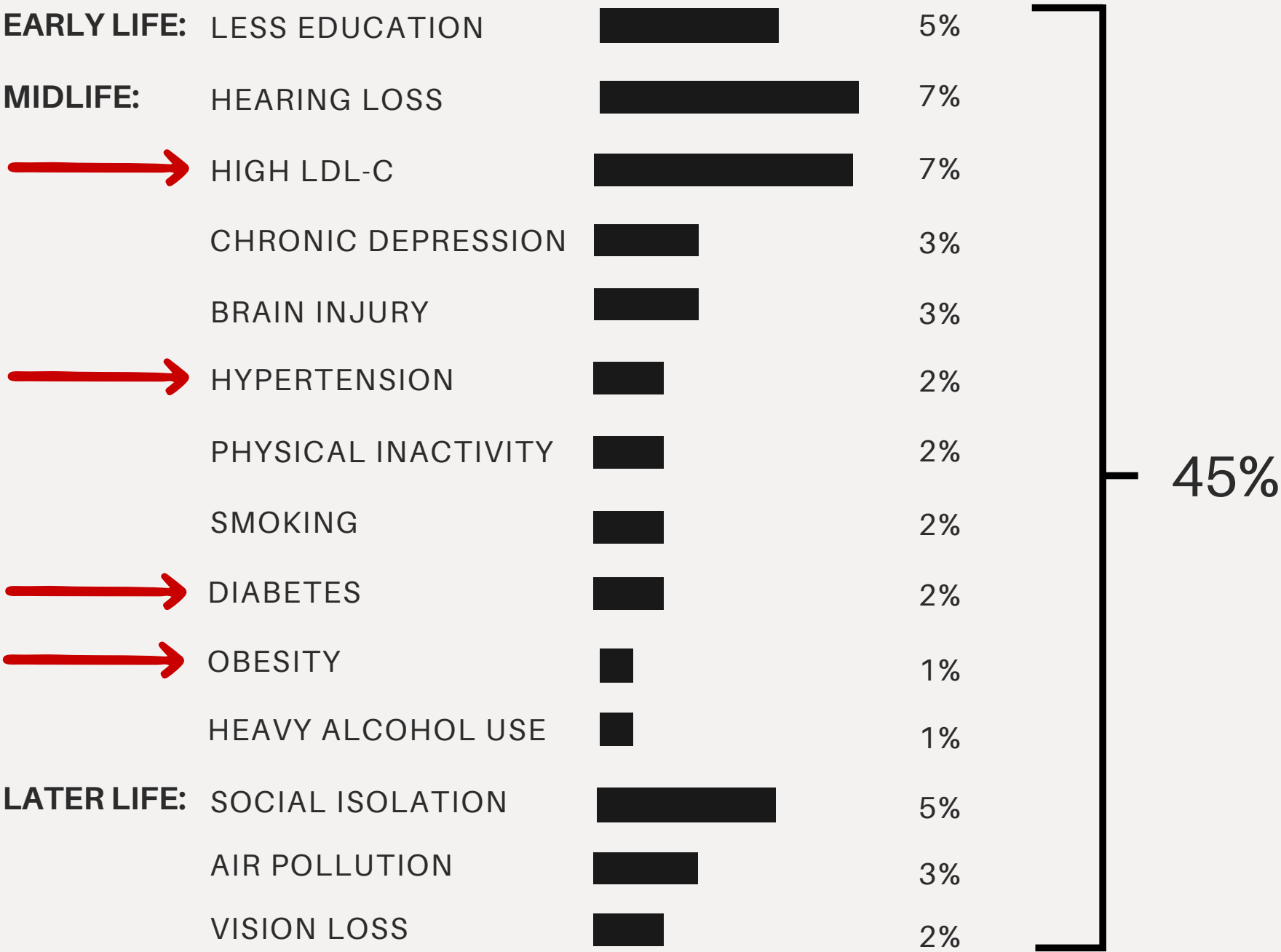
14 MODIFIABLE RISK FACTORS

Dementia Prevention, Intervention, and Care: 2024 Report of the Lancet Commission

Could reduce dementia incidence by 45%, which would eliminate almost 25M cases worldwide.

APOE4 has a bigger impact on women: *exercise + low saturated fat are key*

Nutrition has a significant impact on



KEY NUTRIENTS

VITAMINS, MINERALS, & ESSENTIAL FATS



KEY NUTRIENTS



EPA & DHA: omega 3 essential fatty acids
MARINE LIFE
brain & heart health, inflammation, triglycerides



VITAMIN B6, B12, & FOLATE (B vitamins)
ANIMAL PROTEINS, WHOLE GRAINS, BEANS
brain & nervous system health



VITAMIN D3: vitamin / hormone
SALMON, EGG YOLKS, FORTIFIED FOODS
bone health, inflammation



MAGNESIUM: mineral / electrolyte
NUTS, SEEDS, DARK LEAFY GREENS, BEANS
relaxation / sleep, muscle & nerve function



VITAMIN E: vitamin
NUTS, SEEDS, AVOCADO, OILS
powerful antioxidant protection of neurons



CHOLINE: essential nutrient
EGG YOLKS, SALMON, CHICKEN BREAST
memory, attention, and neural communication



VITAMIN K: vitamin
LEAFY GREENS
sphingolipid synthesis (neuronal cell membranes)



POLYPHENOLS: phytonutrients
WHOLE PLANT FOODS
brain & heart health, inflammation, gut health

THE MIND DIET

THE ELEMENTS



FEATURED IN THE MIND DIET

LEAFY GREENS

GET THIS MUCH:

2+ servings / day

1 cup raw

½ cup cooked

FAVORITES:

kale, spinach, dandelion,
chard, mustard, watercress,
arugula, collards, lettuces,
green leafy herbs (basil,
mint, parsley, cilantro), beet
& turnip tops, microgreens

RESEARCH DEMONSTRATED BENEFITS:

1.3 serving of leafy greens / day = 11 years younger in brain age.

Polyphenols and carotenoids found in greens combat oxidative stress and inflammation

Vitamin K, lutein, and folate maintaining neural integrity and supporting neurotransmitter function

The Nurses' Health Study and the DASH trial demonstrated a decreased risk of coronary heart disease

The Adventist Health Study linked regular leafy greens with a significant reduction in risk of T2 diabetes



FEATURED IN THE MIND DIET

COLORFUL VEGGIES

GET THIS MUCH:

3 1 cup servings raw or
3 ½ cup servings cooked
(3 colors) per day

FAVORITES:

asparagus, artichokes,
bell peppers, celery, carrots,
white & colorful potatoes,
cucumber, tomato,
eggplant, zucchini, winter
squashes, beets, red
cabbage

RESEARCH DEMONSTRATED BENEFITS:

Pigments contain compounds that reduce risk of Alzheimer's disease and other forms of cognitive decline.

In the DASH trial, including more colorful vegetables was associated with a 11 mmHg drop in **blood pressure**.

The PURE study revealed that just three to four servings of vegetables daily reduced the risk of **heart disease** by 22%.

The EPIC-InterAct study showed that eating a variety of vegetables could lower the risk of **type 2 diabetes** by 16%.



FEATURED IN THE MIND DIET

BERRIES

GET THIS MUCH:

½ cup / day
at least 2 servings / week

FAVORITES:

blueberries, wild
blueberries, blackberries,
raspberries, golden
raspberries, strawberries,
cranberries, acai,
gooseberries

RESEARCH DEMONSTRATED BENEFITS:

Polyphenols (particularly anthocyanins) combat oxidative stress and inflammation

Blueberries and strawberries, in particular, have been shown to slow cognitive aging and improve **memory**.

The Nurses' Health Study found 3+ servings / week of berries experienced a 34% reduction in **heart attack risk**.

The PREDIMED trial demonstrated diets rich in polyphenols significantly improved **cardiovascular outcomes**

Meta-analyses have shown regular berry consumption improves **glycemic control and insulin sensitivity** reducing the risk of type 2 diabetes by up to 15%.



FEATURED IN THE MIND DIET

NUTS & SEEDS

GET THIS MUCH:

4+ ¼ cup servings per week (or 2 tablespoons per day)

FAVORITES:

raw and unsalted almonds, walnuts, cashews, hazelnuts, macadamias, peanuts, pecans, pine nuts, pistachios, chia, flax, hemp, pumpkin & sesame seeds

RESEARCH DEMONSTRATED BENEFITS:

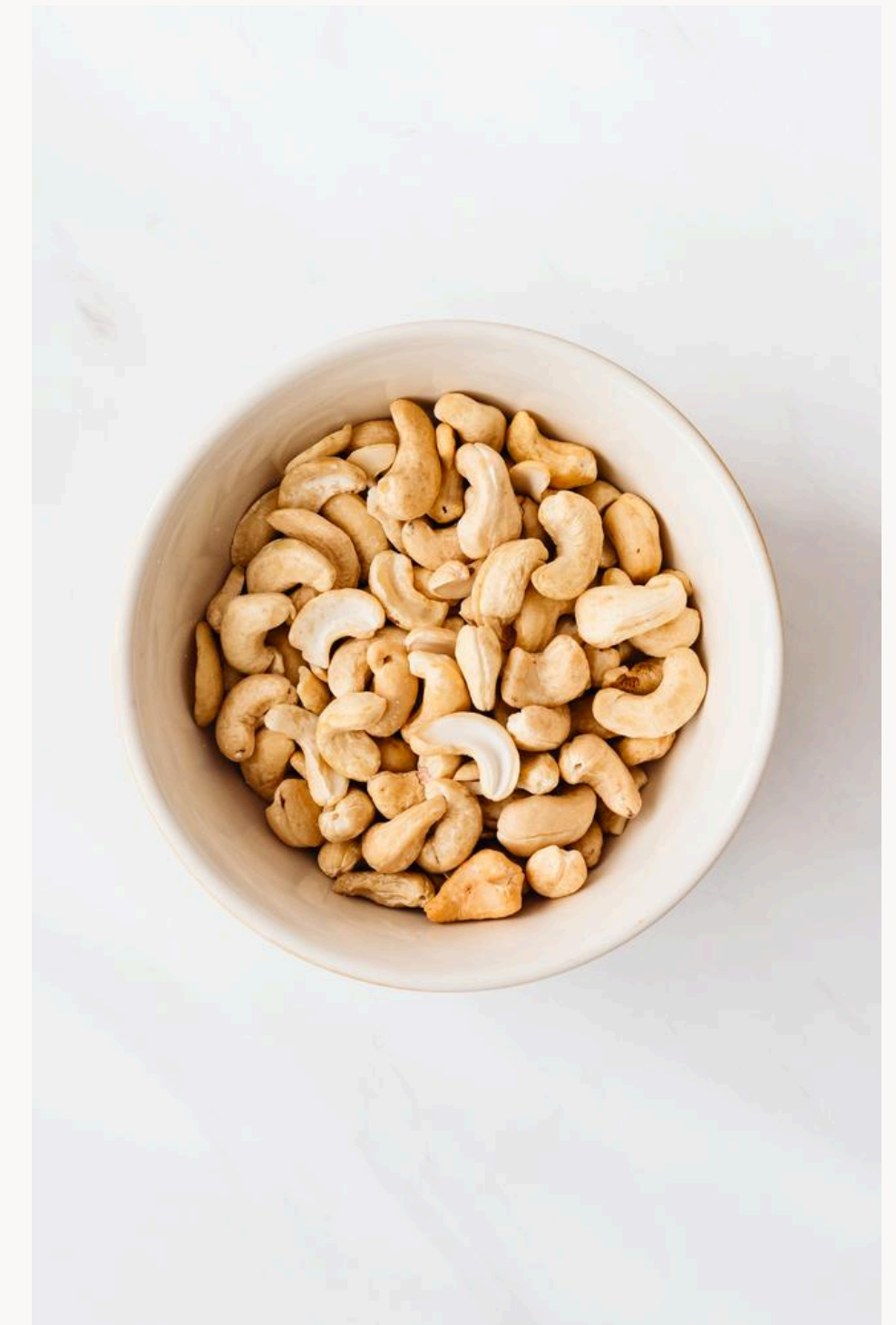
Vitamin E protects the brain from damage linked to aging and neurodegenerative diseases.

Flax and chia deliver **lignans and ALA**, protecting brain cells and promoting overall cognitive health.

The PREDIMED trial showed that a Mediterranean diet with nuts reduced **cardiovascular events** by up to 28%

Similarly, the Nurses' Health Study found that regularly consuming nuts offered a 20% lower risk of **heart disease**.

Eating nuts and seeds could reduce **T2 diabetes** risk by 13%, and benefit blood pressure due to their magnesium, potassium, and heart-healthy fats content



FEATURED IN THE MIND DIET

BEANS

GET THIS MUCH:

Four or more ½ cup servings per week

FAVORITES:

chickpeas, black, lima, navy, great northern, cannellini, fava, split peas, lentils, edamame, tofu, bean pastas & flours

RESEARCH DEMONSTRATED BENEFITS:

Exceptional fiber content, particularly prebiotic fiber, which supports the proliferation of beneficial gut bacteria

Polyphenols, folate, vitamin B1, vitamin B6, magnesium, and zinc –supportive of **brain function** and reduced disease risk.

Viscous fiber content has been shown to reduce **LDL cholesterol**.

The Nurses' Health Study linked regular legume consumption to a 22% lower risk of coronary **heart disease**.

Other research finds reduced **T2 diabetes** risk by up to 35%.



FEATURED IN THE MIND DIET

WHOLE GRAINS

GET THIS MUCH:

three ½ cup servings per day (½ cup is equal to one slice of bread or one 6" wrap)

FAVORITES:

stick to whole grains in their least processed form including quinoa, farro, barley, bulgur, oats, wild rice, and whole wheat

RESEARCH DEMONSTRATED BENEFITS:

Minimally processed grains are an excellent source of **fiber, antioxidants, and polyphenols.**

Individuals consuming 3+ servings daily experience **slower cognitive aging** compared to those with lower intakes

Vitamin E & lignans contribute support neuronal function and protecting against free radical damage.

The Nurses' Health Study found that higher consumption reduced CVD risk by 25% and was associated with **lower LDL.**

Other research demonstrates benefits for **blood pressure, lower T2 diabetes and metabolic syndrome risk**, and improved digestive health.



FEATURED IN THE MIND DIET

FATTY FISH

GET THIS MUCH:

3 to 12 ounces per week

FAVORITES:

anchovies, mackerel,
sardines, cod, canned light
tuna, salmon, trout, halibut,
clams, mussels, oysters,
scallops, crab, shrimp,
lobster

RESEARCH DEMONSTRATED BENEFITS:

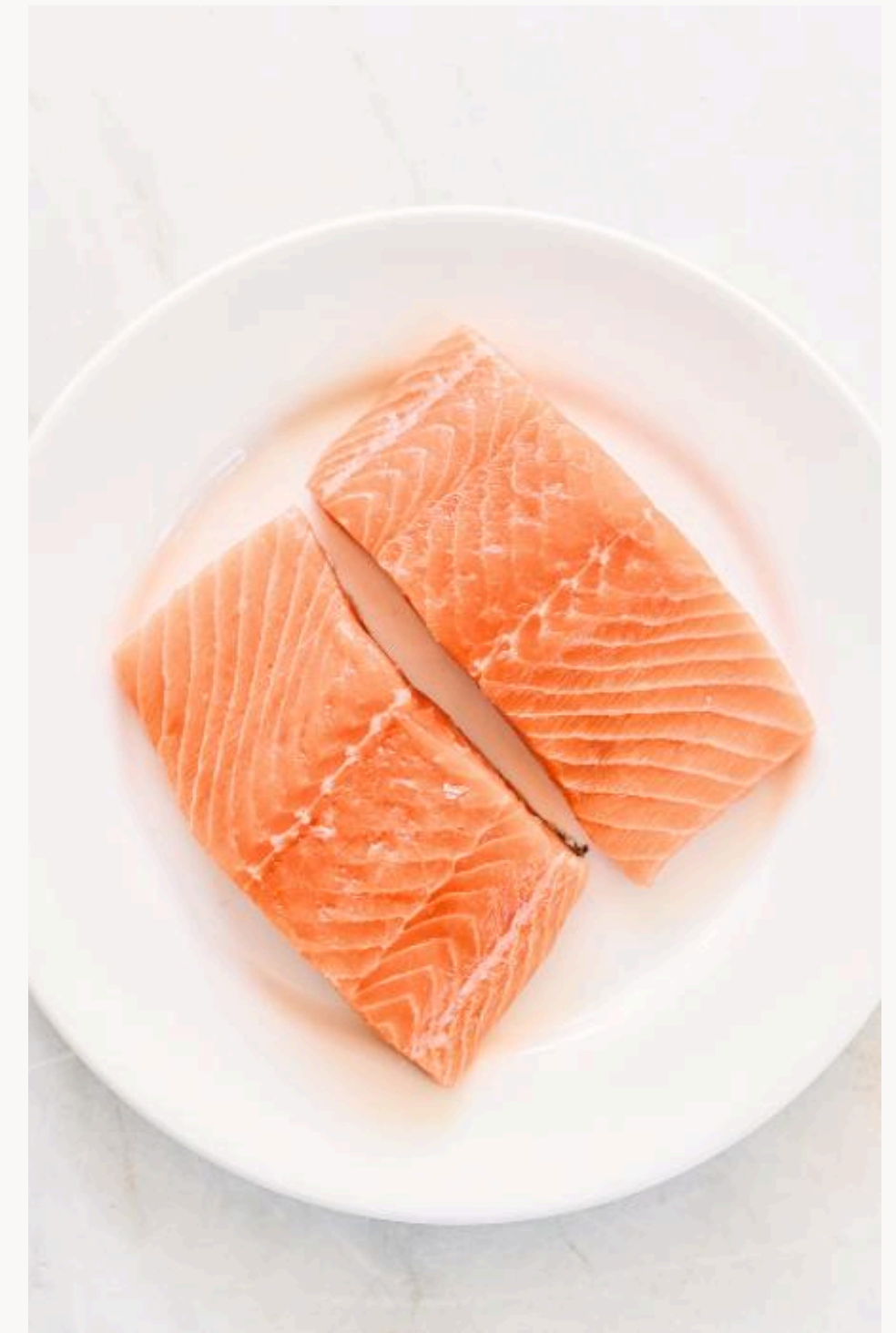
DHA and EPA support brain structure, lower inflammation, and enhance communication between neurons.

Regularly eating fish has been shown to **slow cognitive decline and lower the risk of dementia.**

Vitamin D and selenium protect against **oxidative stress and neurodegenerative damage.**

Research linked a 20% reduction in cardiovascular-related deaths and a 45% lower risk of sudden cardiac death

Other research demonstrates benefits for **blood pressure, reduced risk of T2 diabetes, lower inflammatory markers**



FEATURED IN THE MIND DIET

OLIVE OIL

GET THIS MUCH:

Use olive oil as your primary cooking and dressing fat. Benefits are seen at 2 teaspoons per day.

FAVORITES:

Look for peppery-tasting oils in dark bottles with authenticity certifications such as DOP, PDO, COOC, or IOC.

RESEARCH DEMONSTRATED BENEFITS:

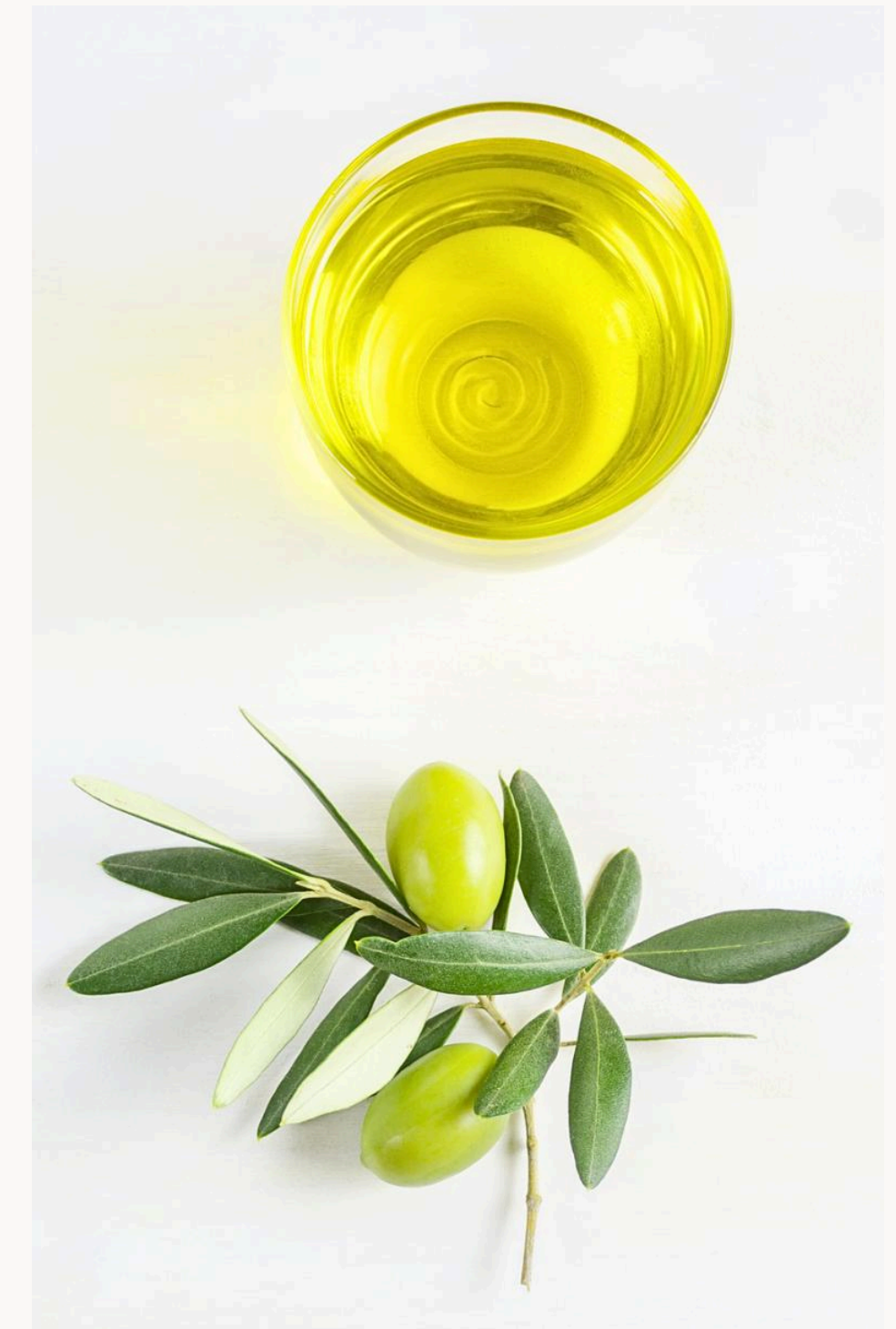
Vitamin E protects the brain from damage linked to aging and neurodegenerative diseases.

Monounsaturated fats and polyphenols – especially oleocanthal – reducing inflammation and oxidative stress.

The PREDIMED trial showed that a Mediterranean diet with nuts **reduced cardiovascular events** by up to 28%

Regular use of EVOO supports **better memory** and slows cognitive decline.

Additional research demonstrates **improved LDL cholesterol, blood pressure, and reduced risk of T2 diabetes, and all cause mortality.**



HONORABLE MENTIONS

THE ELEMENTS



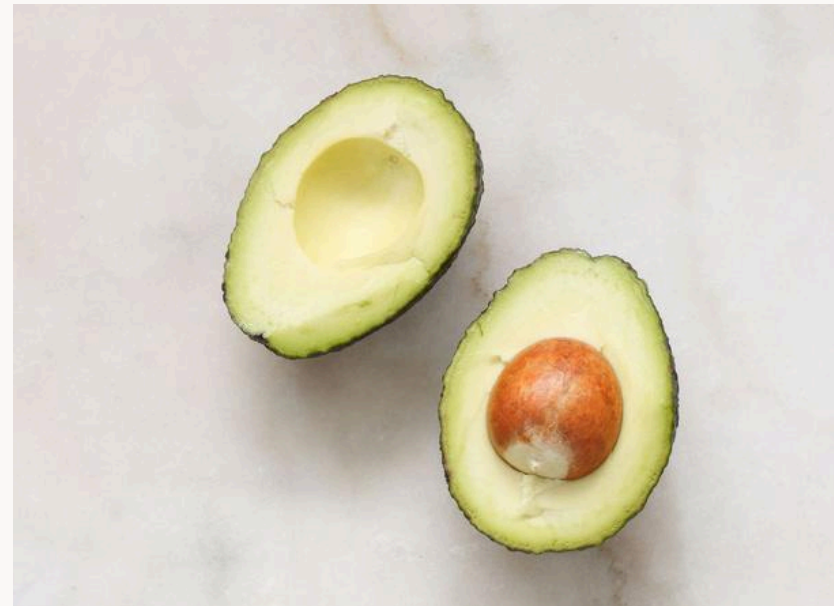
HONORABLE MENTIONS



ALL FRUITS

1 to 2 cups per day

polyphenols
fiber
vitamins & minerals
hydration
quick energy



AVOCADOS

½ medium avocado per day

potassium
fiber
polyphenols
vitamin E
anti-inflammatory fats



CRUCIFEROUS VEGGIES

1 serving daily

sulforaphane (phytonutrient)
glucosinolates (phytonutrient)
fiber
vitamin C & folate
excellent for liver health



ALLIUMS

1 serving daily

allicin (phytonutrient)
quercetin (polyphenol)
prebiotic fiber
folate & B6
neuroprotective & anti-inflammatory

HONORABLE MENTIONS



GREEN TEA & MATCHA

3 cups per day

EGCG (polyphenol)
L-theanine (phytonutrient)
moderate caffeine
antioxidants
reduced risk of cognitive decline



COFFEE

2 cups per day (filtered through paper)

#1 source of antioxidants for many people
polyphenol-rich
caffeine (limit to 400 mg / day)
supports mood & focus
neuroprotective effects



WATER

68+ ounces per day

hydration (critical bodily functions)
supports nutrient delivery
flushes metabolic waste
communication within the brain
improved cognitive function



SPICES

as often as possible in cooking

turmeric (curcumin)
cinnamon
safron
ginger
rosemary

HONORABLE MENTIONS



TOFU & EDAMAME

2-3 servings per week

isoflavones (phytonutrients)
polyphenols
complete plant protein
iron & magnesium
supports vascular health



DARK CHOCOLATE

*1 ounce is a serving
(frequency is unique to you)*

flavonols (polyphenols)
theobromine (phytonutrient)
magnesium
mood-boosting compounds
possible better cognitive performance

be mindful of saturated fat content



MUSHROOMS

several servings per week

ergothioneine (antioxidant amino acid)
beta glucans (prebiotic fiber)
glutathione (antioxidant)
B vitamins
Lion's Mane may have unique benefits

HAPPY DIGESTIVE HEALTH



PREBIOTICS:

A unique type of soluble fiber that helps healthy gut flora flourish. These are the "favorite foods" of beneficial gut bacteria.

- walnuts & flaxseeds
- raw asparagus
- raw dandelion greens
- raw leeks & onions
- slightly green bananas
- oats, rice, potatoes, sweet potatoes
- beans & peas (cooked & cooled)



PROBIOTICS:

Beneficial organisms that live in your gut, that you can also consume in fermented foods, further populating a healthy gut microbiome.

- yogurt
- kefir
- kombucha
- raw sauerkraut
- kimchi
- miso
- some cheeses

BE MINDFUL

MINIMIZE THESE FOODS & COMPONENTS OF FOODS
FOR BETTER CARDIOMETABOLIC HEALTH



HONORABLE MENTIONS



ADDED SUGAR

less than 24 grams (6 teaspoons) per day

sweetened coffee & tea
candy
cookies, baked goods, & pastries
sweetened cereals
ice cream
condiments & dressings
breads, crackers, chips
frozen meals



HIGHLY-REFINED GRAINS

less than 4 servings per week

white bread & pasta
crackers, chips
cookies, baked goods, & pastries



SATURATED FATS

less than 6 to 10% of total daily calories

animal meats
butter
egg yolks
full fat dairy
coconut and palm oils
chocolate



FRIED FOODS

less than once per month

HONORABLE MENTIONS



PROCESSED MEATS

less than once per week

deli meats
hot dogs, sausage, bratwurst
bacon
beef jerky



ULTRAPROCESSED FOODS

less than 10 to 20 percent of total calories

high in calories & low in nutrient-density
hyperpalatable (bliss point)
typically snack foods



ALCOHOL

less than 2 standard drinks per week

5 ounce wine
1 ounce spirits
12 ounce beer
ethanol is a neurotoxin
includes all alcohol types



SWEETENED BEVERAGES

less than 8 ounces per week

soda
sweetened teas
specialty coffee drinks
energy drinks
protein shakes

A BRAIN-LOVING DIETARY PATTERN

THE COMMONALITIES



THE COMMONALITIES

Adequate calories
not too much / too little

Adequate protein
1.2 - 1.6 g / kg
of ideal weight

Lots of plant foods
for polyphenols & fiber

Plant protein
4 to 7 times / week

Omega 3-rich fish
2-3 times / week

**More minimally
processed**
>80% of total calories

**Less ultra-
processed**
<20% of total calories

Less saturated fat
<6-10% of total calories

Less added sugar
<6% of total calories

Less sodium
1500-2300 mg
<1 teaspoon of salt

More water
½ body weight in ounces
(less alcohol & sweetened
beverages)

Use this calculator for calories & this app for tracking calories, macros, & nutrients

5 PART PLATE

PROTEIN

4 - 6 ounces

Chicken breast
Turkey breast
Salmon
Tuna
Halibut
Sea Bass
Shellfish
Hard boiled eggs
Scrambled eggs
Omelet
Greek yogurt
Cottage cheese
Tofu
Tempeh
Edamame

GREENS

1 cup

Romaine
Butter lettuce
Little gem
Iceberg
Red Leaf
Green Leaf
Spinach
Arugula
Kale
Chard
Collards
Bok choy
Dandelion
Microgreens

COLOR

1 cup

Asparagus
Fennel
Bell peppers
Zucchini
Summer squash
Spaghetti squash
Green beans
Radish
Cucumber
Carrots
Celery
Tomatoes
Red cabbage
Corn
Eggplant
Mushrooms

FIBER-RICH STARCH

½ cup

Chickpeas*
Beans & bean pasta*
Lentils*
Split peas*
Potato
Sweet Potato
Butternut squash
Acorn squash
Brown rice
Quinoa
Oats
Barley
Millet
Whole wheat couscous
Whole grain pasta or bread
Whole wheat tortilla

**also contains decent amounts of protein*

FATS

see below

Olive oil
Avocado oil
Avocados
Nuts
Seeds
Cheese

- 2 teaspoons oil
- 1/2 small avocado
- 2 tablespoons nuts
- 1 tablespoon seeds
- 1 oz low-fat cheese



A DAY OF MIND-FUL EATING

BREAKFAST



*oatmeal
fruit
nuts & seeds*

LUNCH



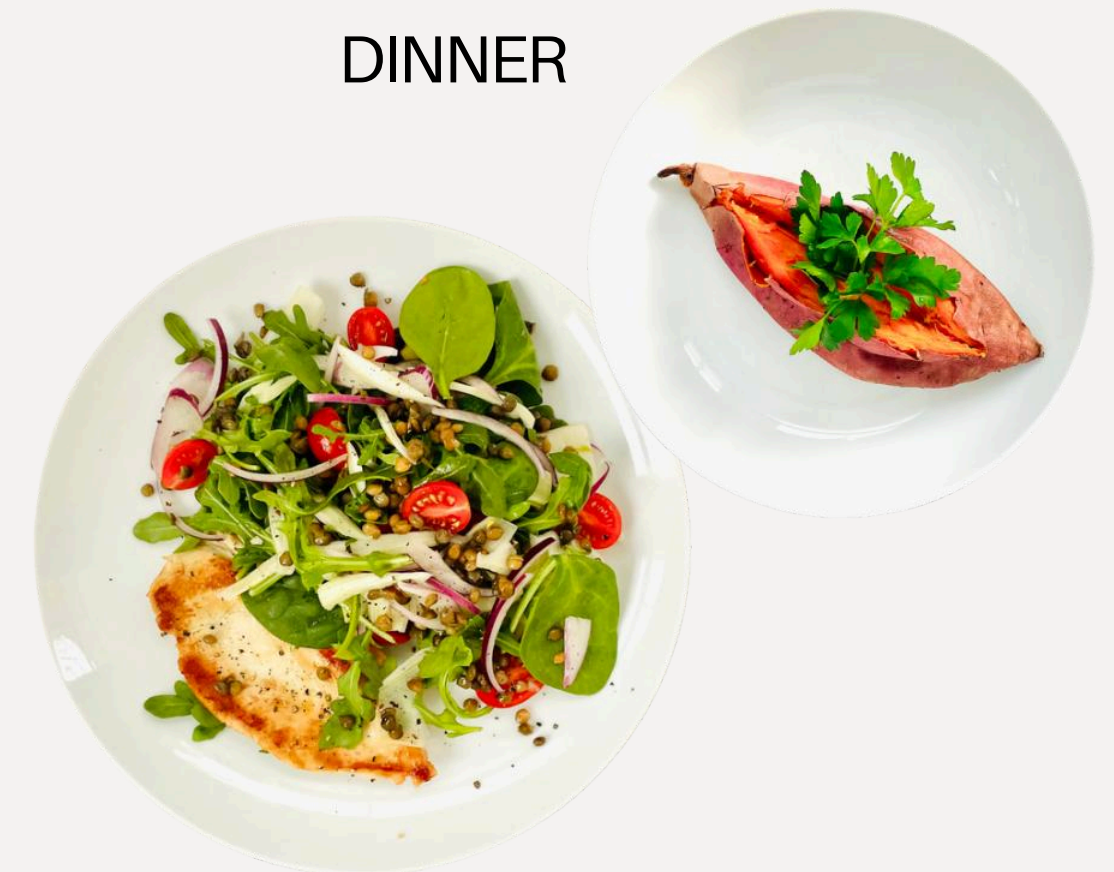
*tuna in vinaigrette
leafy greens
whole grain bread
carrot-tomato soup*

SNACK



*hummus
fresh veggies*

DINNER



*chicken breast
leafy green salad with lentils
sweet potato*

Every meal is an opportunity
to show your brain some love.





LET'S CONNECT

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