

Nutrition for Healthy Aging

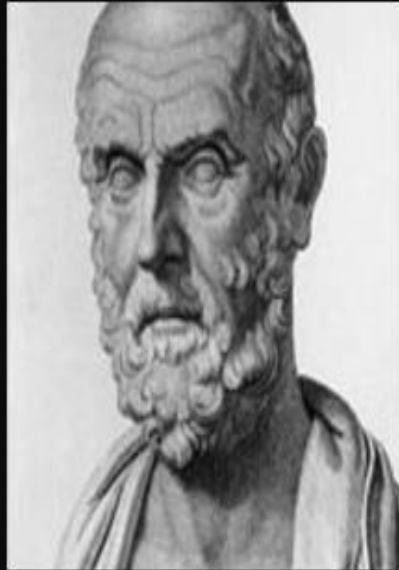


What is healthy eating
????

How did it get
so confusing????

low carbohydrates
keto diet
high protein
intermittent fasting





Let food be thy medicine and
medicine be thy food

~ Hippocrates

What to Eat on the Mediterranean Diet!



Whole Grains, Legumes,
Fruit, Vegetables, Healthy
Fats, Herbs & Spices
Enjoy Daily



Fish, Seafood & Omega-3
Rich Food
Enjoy 2-3x/week



Poultry, Eggs & Dairy
Enjoy 1-2x/week



Red Meats & Sweets
Enjoy Sparingly



Physical Activity,
Meal & Family Time
Practice Daily



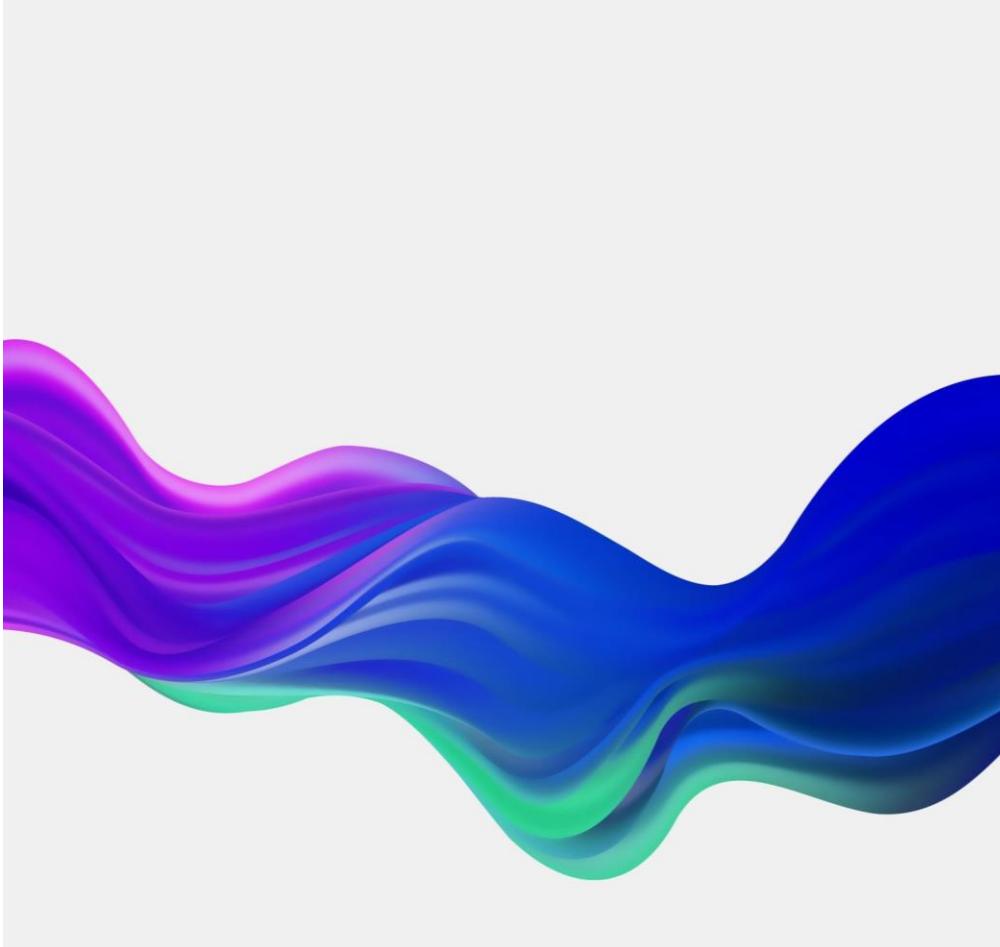
What is the best diet to follow?

The recommended intake for women is 25 gram and men is 35grams.

THE AVERAGE INTAKE is 10-15Grams per day



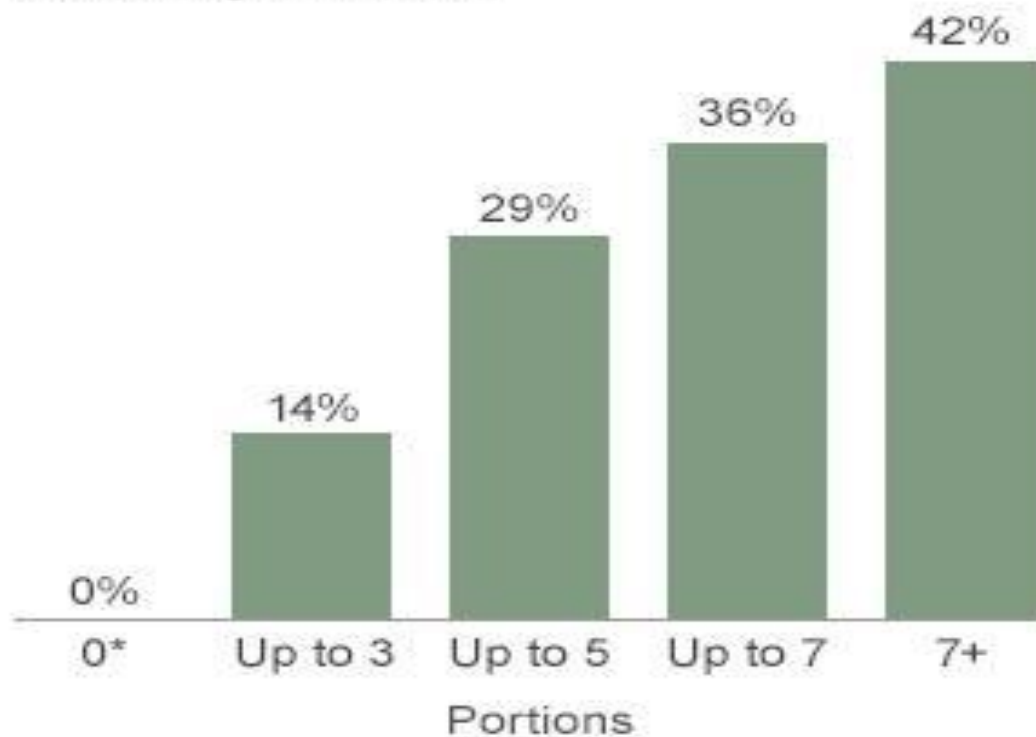
Why is Fiber so IMPORTANT



- **protect the intestinal epithelium(Mucin) against pharmacological insults and food toxins.**
- **Flavonoids from fruits, vegetables, nuts, and legumes inhibit gut inflammation.**
- **Produces a magnitude of essential nutrients such as B-vitamin, vitamin K**

How fruit and veg intake reduces risk of death

Percentage decrease



*0 portions = 0%

Source: Journal Epidemiol Community Health

Cruciferous Vegetables

THE MANY BENEFITS OF SULFORAPHANE

Sulforaphane is a compound within the isothiocyanate group of organosulfur compounds. It is found in highest amounts in cruciferous veggies such as broccoli, kale, collard greens and especially broccoli sprouts. In these foods it is in the inactive form glucoraphanin. The myrosinase enzymes are released in the plant when it is damaged and they turn glucoraphanin into sulforaphane. So cruciferous veggies must be cut, chopped or chewed to release myrosinase and activate sulforaphane.



Mitochondrial Health

Protects mitochondria and stimulates mitochondrial biogenesis and improved cellular energy levels.



Immune Defense

Protects against pathogens such as H Pylori and Epstein Barr virus.



Activates NRF2

The Body's Strongest Defense Against Oxidative Stress.



Lowers Inflammation

By Lowering Inflammatory Markers Like TNF-Alpha and CRP.



Slows The Aging Process

By Protecting Cells from Oxidation



Boosts Liver Detoxification

By Boosting Phase 2 Enzymes + Glutathione



Activates Antioxidants

Like Glutathione and SOD



Prevents DNA Damage

By lowering oxidative stress & preventing DNA adducts.



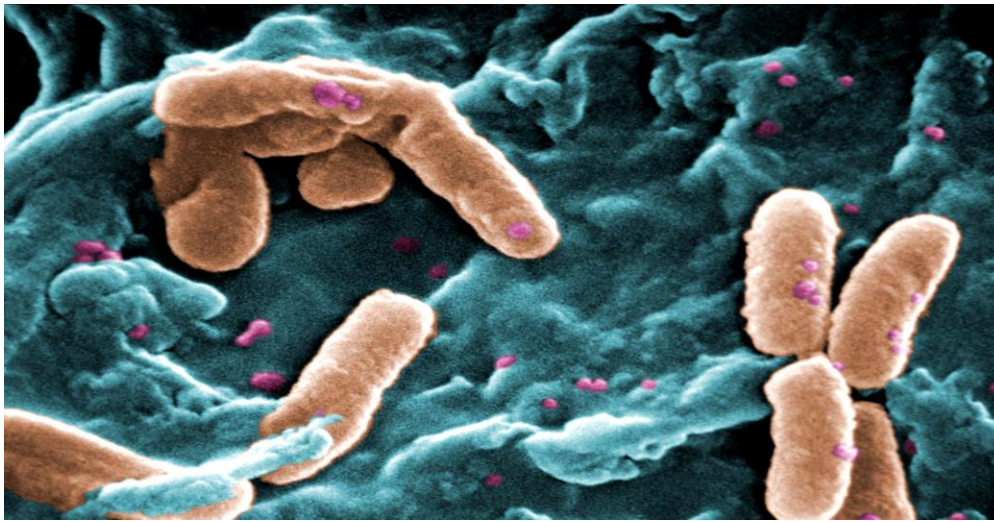
Deactivates Carcinogens + Increases Their Excretion

e.g Benzene

DRJOCKERS.COM
SUPERCHARGE YOUR HEALTH!

Gut bacteria-Microflora

Their numbers can vary from 10 trillion to 100 trillion microorganisms at any given time.



Function in host nutrient metabolism, xenobiotic and drug metabolism, maintenance of structural integrity of the gut mucosal barrier, immunomodulation, and protection against pathogens.

What are the most lacking nutrients in our diets?

- **Between 70% and 97% of Canadians demonstrate vitamin D insufficiency.** Furthermore, studies assessing 25(OH)D levels of vitamin D at 25-40nmol/l reveal that many Canadians have profoundly deficient levels.
- One of the **most common nutritional deficiencies in older adults is calcium**—and without enough calcium, seniors may suffer from bone loss, osteoporosis, or a higher risk of falling and hurting themselves.
- **Subclinical magnesium deficiency: a principal driver of cardiovascular disease** and a public health crisis. Approximately 20% population is deficient. Magnesium is essential for many bodily functions, including **maintaining blood sugar and pressure**, making protein, building bones, **supporting your DNA**, and regulating muscle and nerve function.
- **Vitamin B12 about 15% to 25% of older adults** with vitamin B12 (NIH) that may be **caused by producing less intrinsic factor or on proton pump inhibitors, metformin, etc.**



Magnesium is a cofactor in more than **300 enzyme systems** that regulate diverse biochemical reactions in the body, including protein synthesis, muscle and nerve function, blood glucose control, and blood pressure regulation [1-3]. Magnesium is required for energy production, oxidative phosphorylation, and glycolysis. Jun 2, 2022.

These functions include conversion of vitamin D to active form.
Converting tryptophan into serotonin-deficiencies can led to (depression).

Vitamin D deficiency

Can result in chronic pain, delayed wound healing, depression(decreased serotonin), osteoporosis, etc...



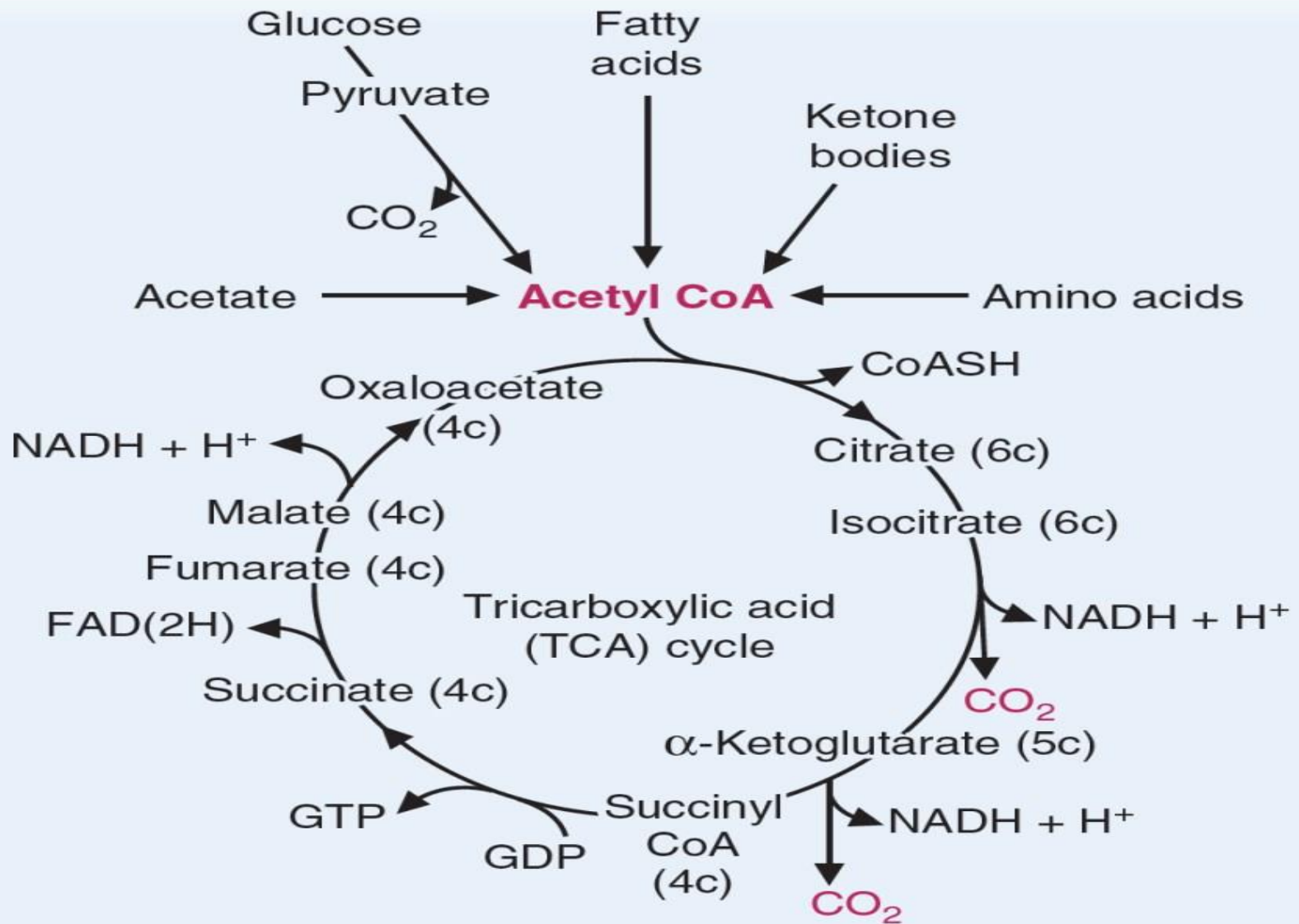
Folate **deficiency** in rats induces DNA strand breaks and hypomethylation within the p53 **tumor suppressor gene**

YI Kim, [IP Pogribny](#), AG Basnakian... - ... of clinical **nutrition**, 1997 - [academic.oup.com](#)

... We investigated the effect of isolated folate **deficiency** in rats on DNA methylation and DNA

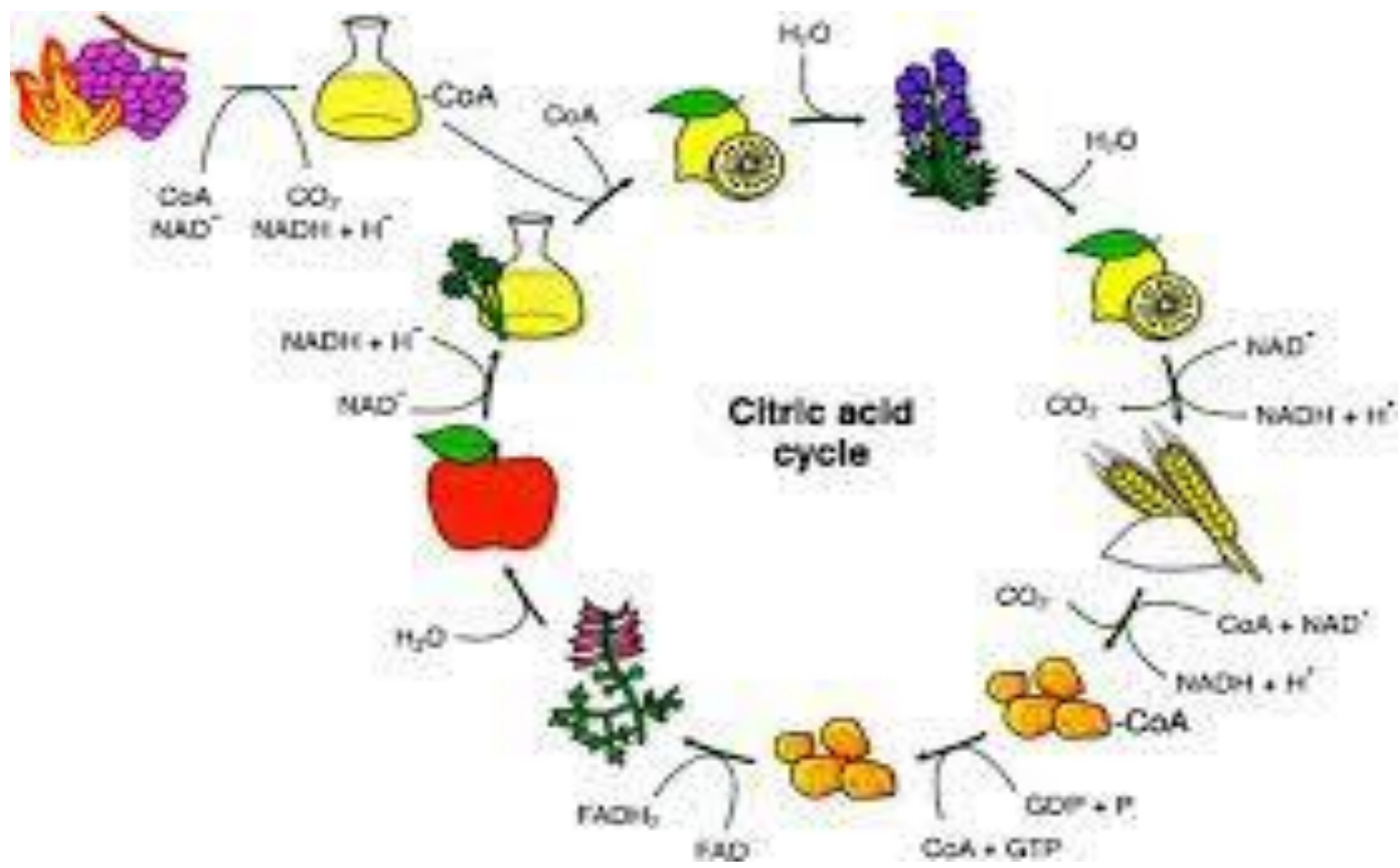
... of the p53 **tumor suppressor gene**. Our data indicate that folate **deficiency** induces DNA ...

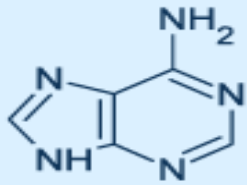
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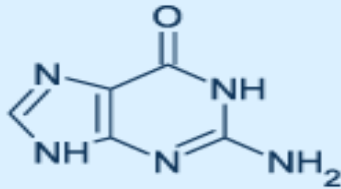
Net reaction



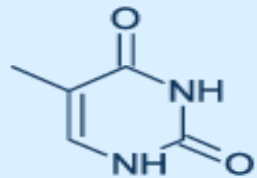




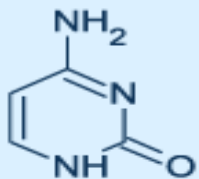
Adenine



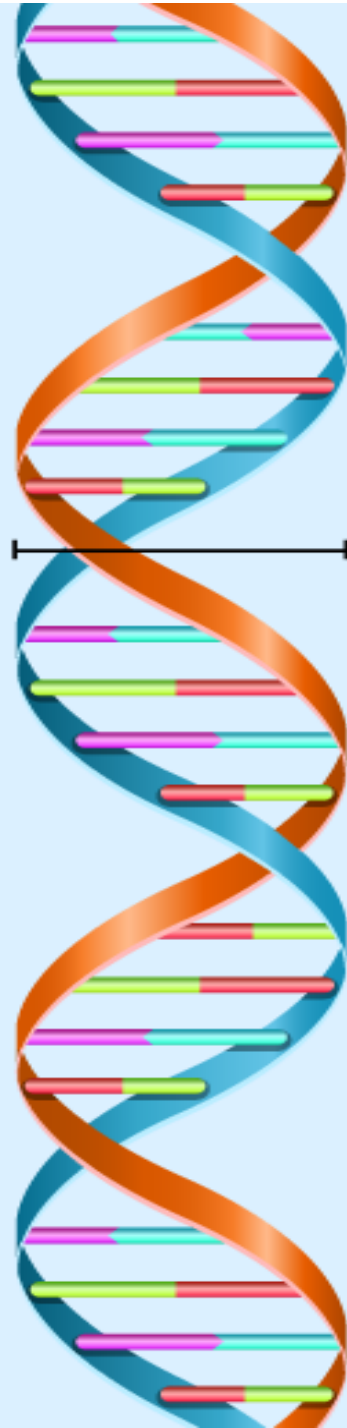
Guanine



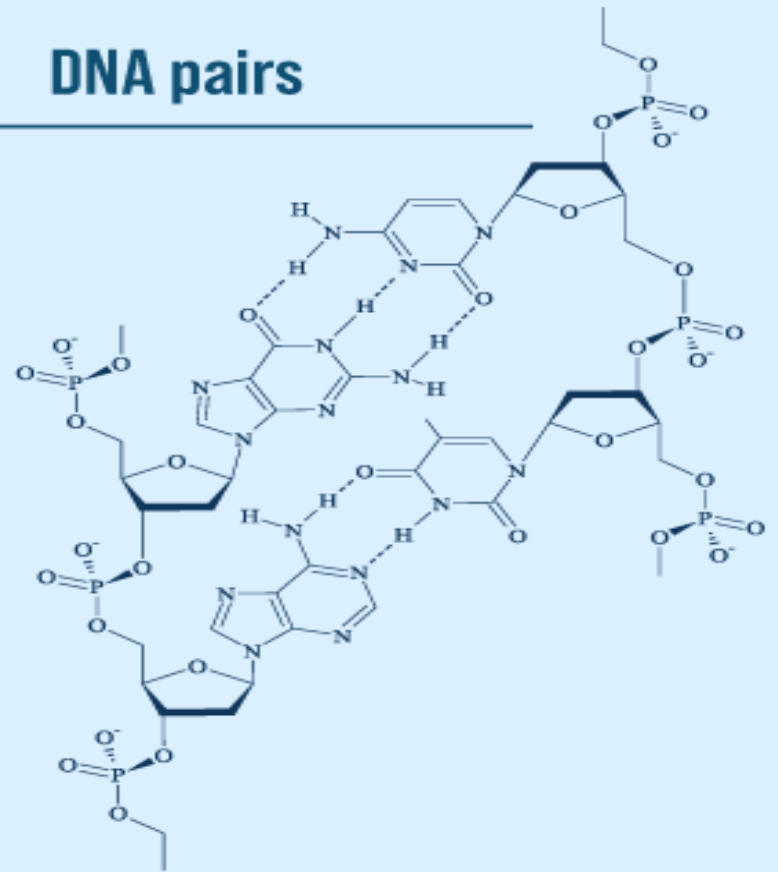
Thymine



Cytosine




DNA pairs




FACTS ABOUT DNA:

  DNA could stretch from the earth to the sun 600 times

 We're all 99.9 percent alike

3×10^9  The human genome contains 3 billion base pairs of DNA

 A fast typist, working eight hours a day, would take 50 years to type out the human genome



Sweets

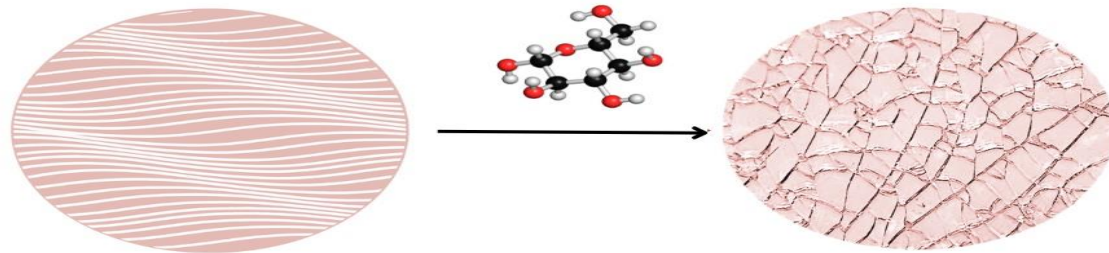


- **Advanced glycation end products (AGEs)** are proteins or lipids that become [glycated](#) as a result of exposure to sugars.^[1] They are a biomarker implicated in aging and the development, or worsening, of many [degenerative diseases](#), such as [diabetes](#), [atherosclerosis](#), [chronic kidney disease](#), and [Alzheimer's disease](#).¹

JESSICA ALANA

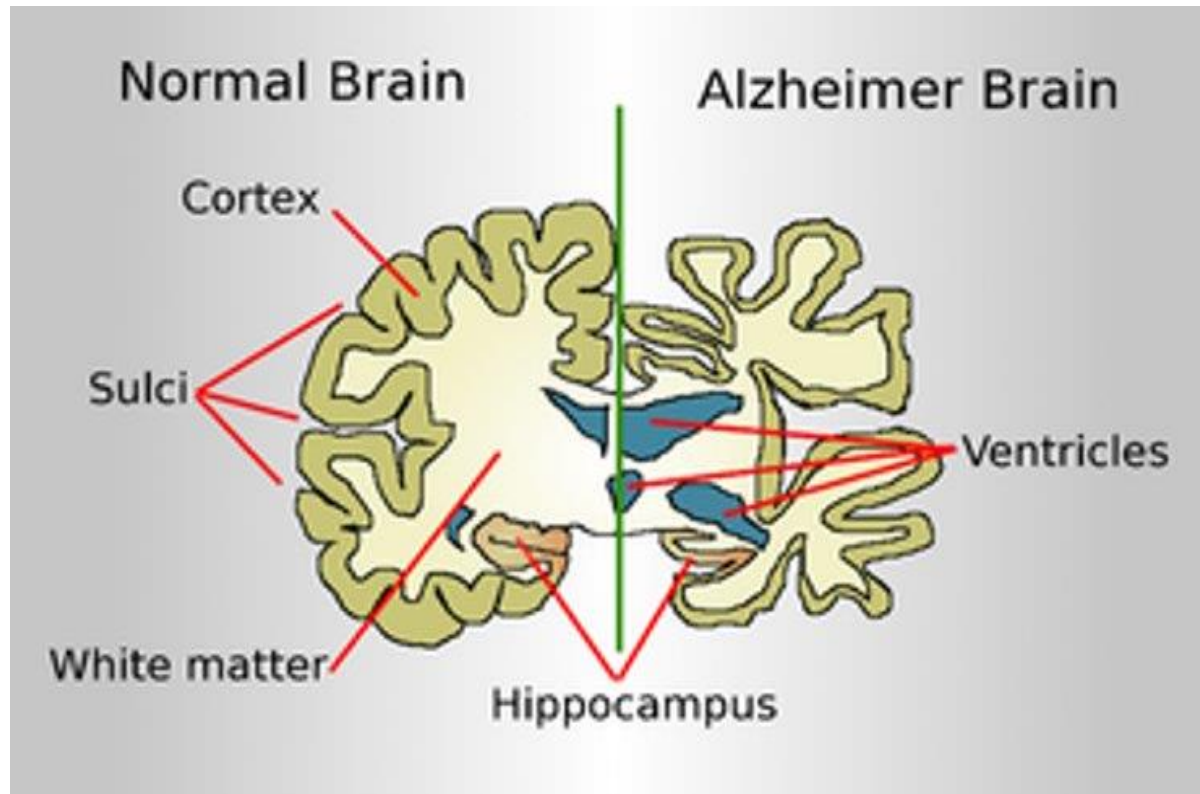
HOW DOES SUGAR AGE YOUR SKIN?

THROUGH A PROCESS
KNOWN AS GLYCATION.



EXCESS SUGAR MOLECULES BOND TO COLLAGEN
AND ELASTIN, FORMING ADVANCED GLYCATION END
PRODUCTS (AGEs).

Alzheimer's called Type 3 diabetes



Glycosylation of skin from sugar



During the formation phase, **anthocyanins** prevent carcinogenesis by targeting the MAPK pathway and AP-1 and by inhibiting RTK activity and its signal cascade pathway to regulate the expression of cancer-related genes, which leads to cell cycle arrest and **DNA repair**.

Rinse with 2 tsp baking powder in 2 liters of water



Blackberries



Blueberries



Black Currants



Elderberries



Figs



Purple Grapes



Plums



Prunes



Raisins



Purple Asparagus



Purple Cabbage



Eggplant



Purple Carrots



Purple Pepper



Purple Potatoes



Purple Kohlrabi

China Study

- In a series of experiments, a diet high in animal protein was fed to animals who had been exposed to a cancer-causing toxin. Their liver tumors grew rapidly. However, the tumors stopped growing when animal protein was decreased and replaced with plant proteins.

Minerals

- Iron -mainly meat and fortified grains
- Iodine -salt water seafood
- Fluoride -tea and seaweed
- Potassium -fruit/vegetable
- Chromium -whole grain, legumes egg yolk
- Zinc -seafood, meat, greens and grains
- Copper -liver, cocoa beans, nuts ,grain
- Magnesium -legumes, nuts and vegetables

- Selenium -fish, meat, eggs,milk, shellfish





Meat consumption is just as dangerous to public health as tobacco use... It's time we looked into holding the meat producers and fast-food outlets legally accountable.

— *Neal Barnard* —

AZ QUOTES



The China Study

- **The Cancer/Animal Foods link** One of the most dramatic findings of the China Study was the strong association between foods of animal origin and cancer. Was Dr. Chen Junshi, the chief Chinese **researcher**, surprised to find so much more cancer in villages high in these foods than those low in them? “No”, he said, “We expected that because it followed animal experiments that have shown similar increases in cancer in animals on high animal protein diets.”

According to the World Health Organization...

Eating **50g** of processed meat a day - less than two slices of bacon - increased the chance of developing colorectal cancer by **18%**.



Source: IARC/WHO

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Meat



Blackcurrant



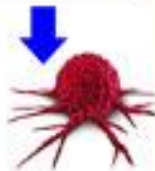
Garlic

Inhibition of enzymes activity

Cytochrome P450



Liver



Cancer



Clove



Licorice

Inhibition of cancer cell growth



Mitochondria membrane



DNA mutation



Star anise



Rosemary



Chili pepper

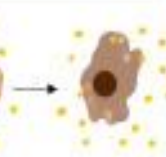
Inhibition of oxidative stress



Normal cell



Attack free radicals

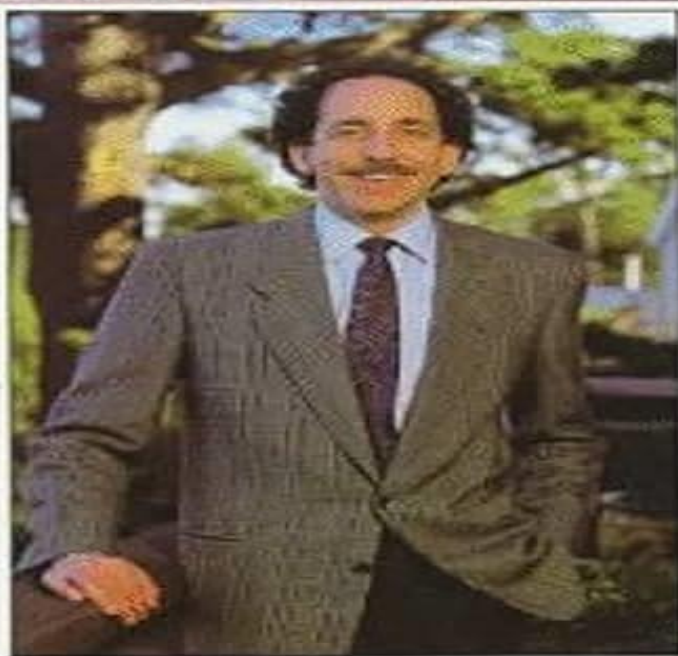


Oxidative stress

Reduction of cancer induced heterocyclic amines

Dr. DEAN ORNISH'S PROGRAM FOR REVERSING HEART DISEASE

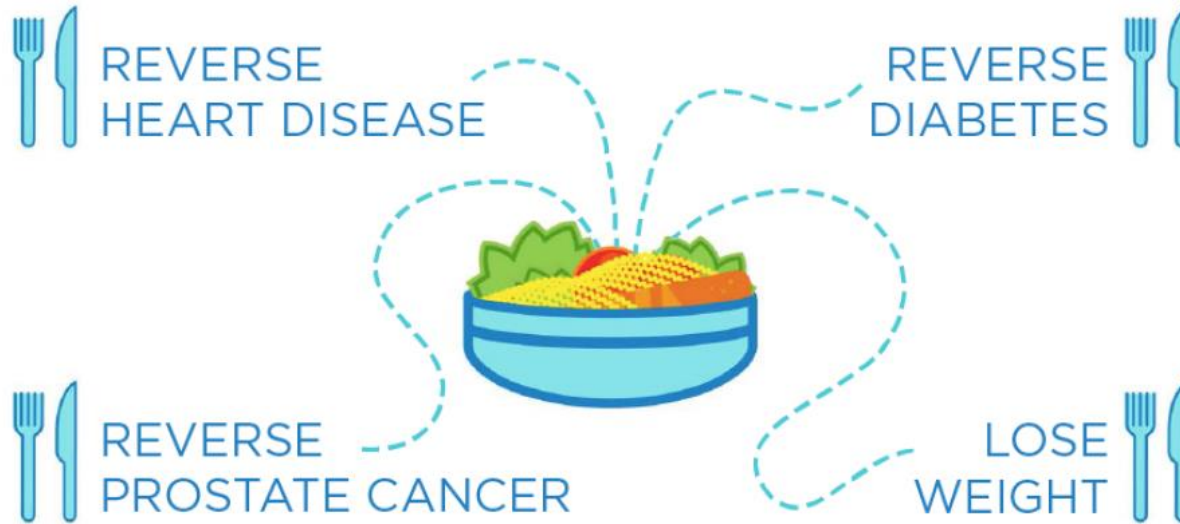
The Only
System
Scientifically
Proven to
Reverse
Heart Disease
Without
Drugs or
Surgery



Following the Dean Ornish Reversing Heart Disease Program

- Low fat diet not having more than 10% calories from fat.
- Follow lacto ovo vegetarian diet.
- Exercise program.
- Learn relaxation techniques.

THE ORNISH REVERSAL PROGRAM CAN:



OUR RESEARCH FOUND THAT THE **SAME** DIET AND LIFESTYLE RECOMMENDATIONS CAN ACCOMPLISH **EACH OF THESE**. IT'S AS THOUGH YOUR BODY CAN **PERSONALIZE** WHAT IT NEEDS TO HEAL IF YOU GIVE IT THE **MOST HEALTHY INGREDIENTS**.



Figure 2. Quantitative coronary angiograms and cardiac PET scans obtained

How much water you should drink, before factoring in physical activity

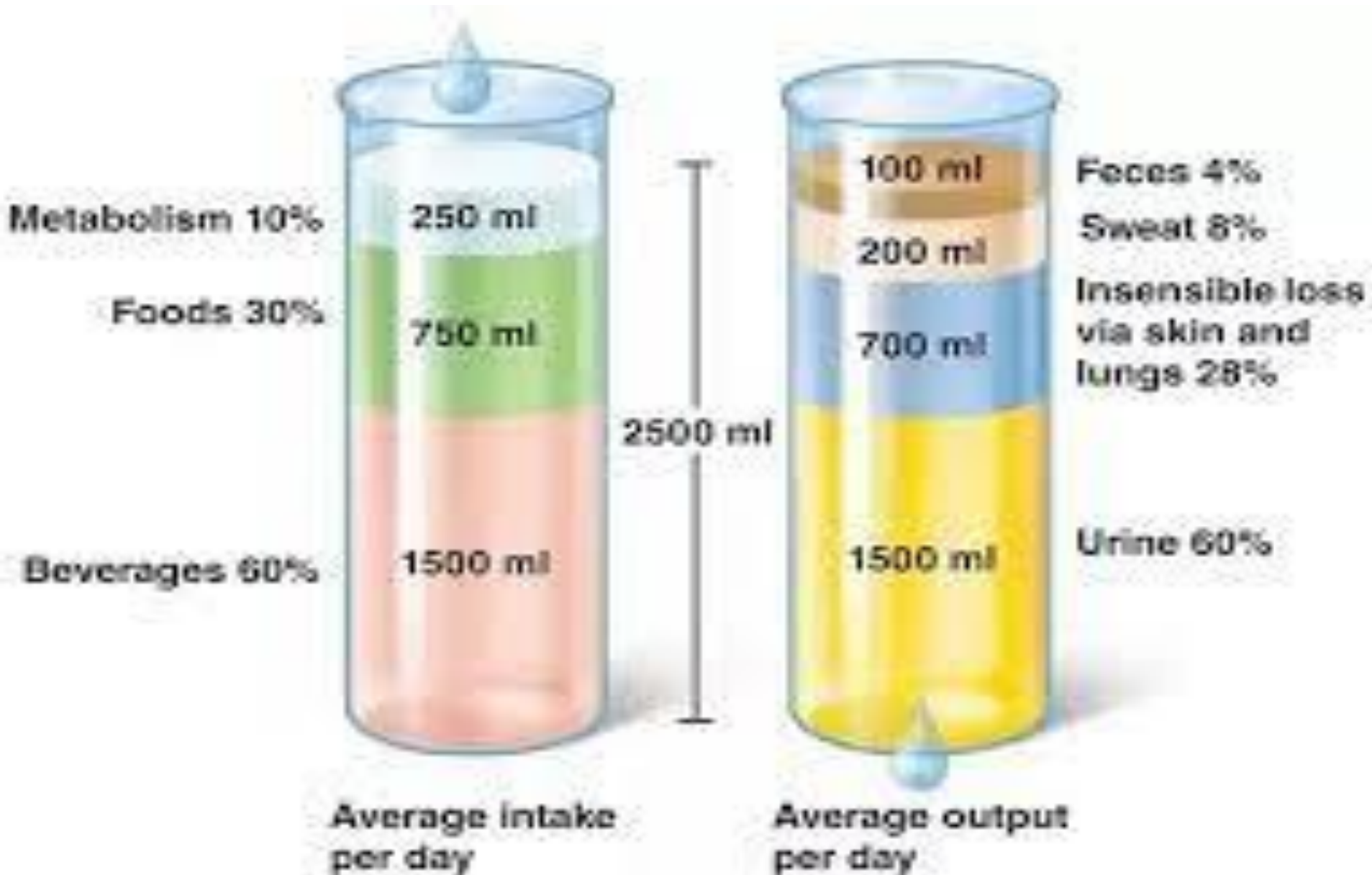
Calculation: $\text{your weight} \times 0.5 = \text{oz. of water per day}$

Example: $200 \text{ lbs} \times 0.5 = 100 \text{ oz. per day}$

BENEFITS OF STAYING HYDRATED



By the time you're thirsty dehydrated has already happened



Signs and Symptoms of Dehydration



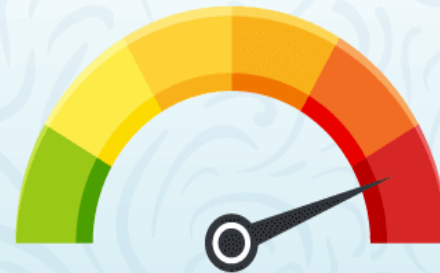
Signs of mild Dehydration

- Thirst
- Dry or sticky mouth
- Yellow coloured urine
- Not urinating much



Signs of moderate Dehydration

- Dry, cool skin
- Headache
- Muscle cramps



Symptoms of alarming and dangerous ranges of Dehydration

- Dark yellow or amber-coloured urine
- Dry, shrivelled skin
- Irritability or confusion
- Dizziness or lightheadedness
- Rapid heartbeat
- Rapid breathing
- Listlessness
- Shock (less blood flow through the body)
- Sunken eyes
- Unconsciousness or delirium

Summary

HOW TO BE HEALTHY

Exercise Daily

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Think positive

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Get enough sleep

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Keep emotional balance

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Drink more water

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Eat more fruits and vegetables

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Do meditation

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