

CORNERSTONE HEALTH

EMPOWERING THE MIND TO
TRANSFORM THE BODY

SECTION 1: FOUNDATIONS OF HEALTH



Principle#3 Nourishment

Discussion points

What is the difference between Real food and Soul Food?

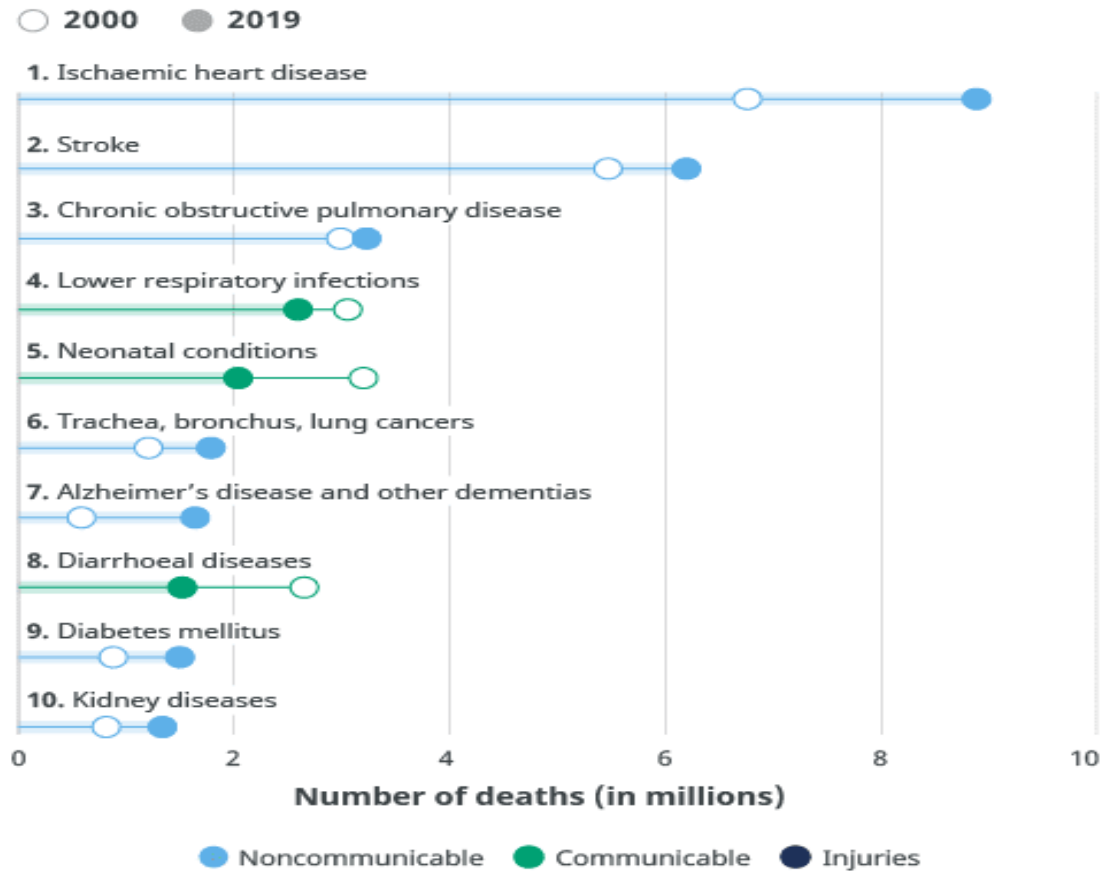
What does the body do with Real food and Soul food?

How do we transition into eating Real food?

Fast Facts: CDC

- Heart disease: 659,041
- Cancer: 599,601
- Accidents (unintentional injuries): 173,040
- Chronic lower respiratory diseases: 156,979
- Stroke (cerebrovascular diseases): 150,005
- Alzheimer's disease: 121,499
- Diabetes: 87,647
- Nephritis, nephrotic syndrome, and nephrosis: 51,565
- Influenza and pneumonia: 49,783

Leading causes of death globally



Source: WHO Global Health Estimates.

Real food and Soul Food

Real Food



Soul food



What is the difference between Real food and Soul Food?

Let's define food...

- Food: any nutritious substance that people or animals eat or drink or that plants absorb in order to maintain life and growth.
- Scientific definition: Food is matter (building materials) that contains energy living things can use to live and grow. All living things need both the matter and energy in food to grow, to heal wounds, and to keep all their parts working.
- 5 types of consumable foods:
 1. Fast Food
 2. Junk Food
 3. Processed Food
 4. Cultural Food
 5. Whole Food

Fast Facts: 1Cor 10:23

People following vegan diets are less likely to develop chronic diseases, compared with other dietary groups, according to a study funded by the NIH/National Cancer Institute. Based on those biomarkers, the vegan group had the lowest risk for cancer, heart disease, and hypertension, compared with the other groups.



Guilty by Association

Real food

- Lower risk for developing:
 1. Cancer
 2. Heart disease
 3. Diabetes

Soul Food


- Higher risk of developing:
 1. Diabetes
 2. High blood pressure
 3. Heart disease

What does the body do with real food and soul food?



Pro: 14:12/2 Cor 11:14/1 Cor 10:23

Real

- 
- Fats- Dietary
 - Proteins- Plants
 - Carbs- Whole
1. Sugar- Glucose, Fructose
 2. Starch- Whole/ Unrefined
 3. Fiber- Dietary

Soul

- Fats- Dietary
 - Proteins- Animal products
 - Carbs- Processed
1. Sugar- Fructose, Sucrose, Lactose
 2. Starch- Refined/ Enriched
 3. Fiber- Functional (extracted & added)

Chemical Signaling: Fat in the Driver's Seat

Researchers used to think that fat tissue was inert, serving only to store energy. More-recent research has shown that fat plays an active role in regulating many body systems, including the immune system, the cardiovascular system, and the reproductive system.

Fat tissue produces more than 50 different kinds of signaling molecules that act on many types of cells through the body. The specific chemical signals fat tissue produces depends on both the amount of fat someone has and where that fat is located.

In healthy-weight people, fat tissue usually produces signaling molecules in the right proportions. However, having too much or too little fat can disrupt the balance. For instance, inflammation is part of the normal immune response, and fat tissue produces some molecules that increase inflammation and others that suppress it. In obese people, fat tissue makes more pro-inflammatory chemicals, which can raise inflammation to dangerous levels.

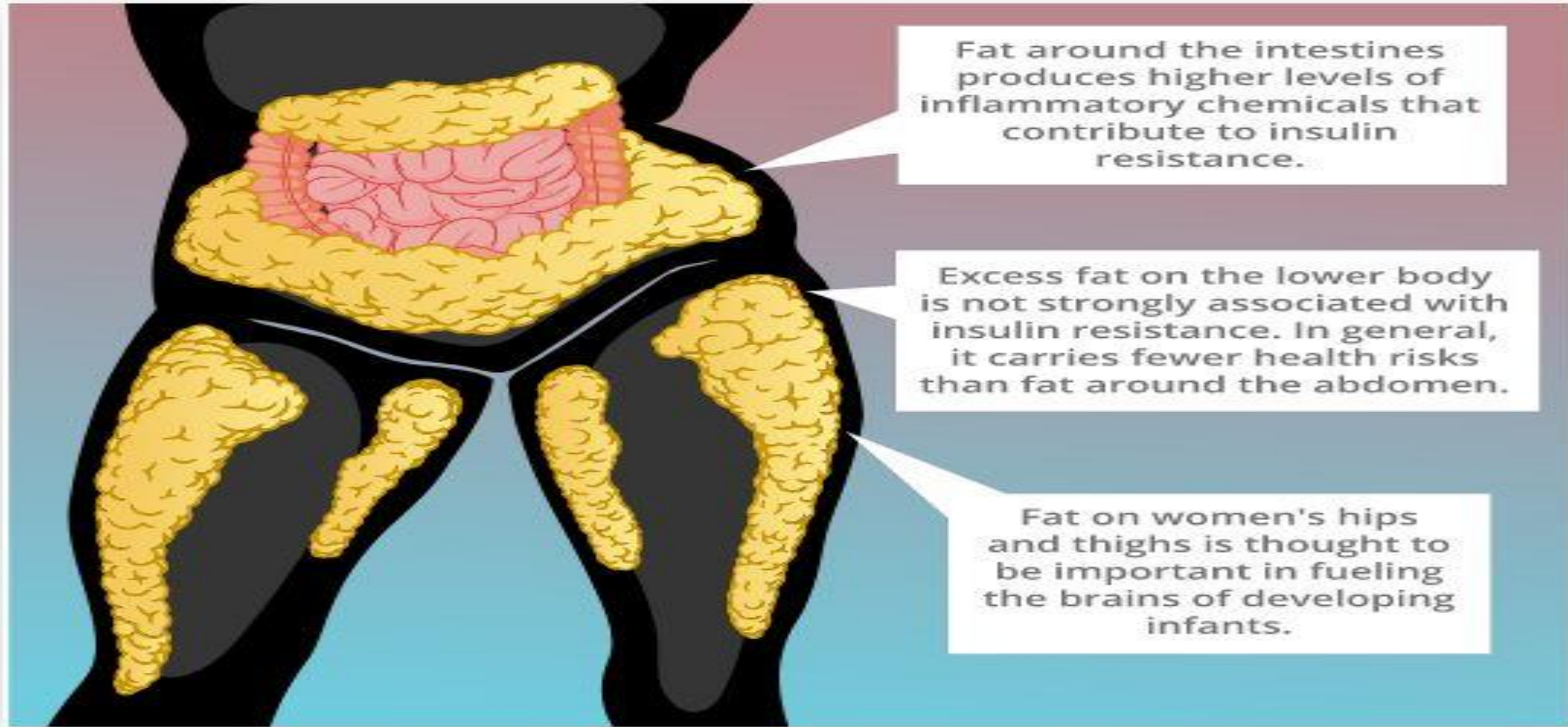
Fat also helps make steroid hormones, including the sex hormones estrogen and testosterone. Steroid hormones all share a similar structure, and they are produced from scratch in the ovaries, testes, and adrenal gland. Fat tissue can modify these steroid hormones, converting one type into another. Using other hormones as a starting point, fat produces nearly all of the estrogens in older women and up to half of the testosterone in reproductive-aged women.

Well...actually, we all do. Without fats and related molecules (known collectively as lipids) your body would quite literally fall apart, because there would be no cell membranes to hold it together. Not only do lipids form membranes, they are the basis of many chemical messengers and a major component of nerve cells, forming nearly 60 percent of the human brain.

Cholesterol is a lipid with a bad reputation for its role in cardiovascular disease, but it is one of the key components of cell membranes and the precursor for testosterone, estrogen, and other essential hormones.

Fat in food also helps us absorb certain micronutrients, including vitamins A, D, K, and E. These vitamins can dissolve in fat but not in water, and we need a few grams of fat with each meal to absorb them effectively.

What about that extra fat that rounds out our bodies? While obesity isn't healthy, we need some fat tissue. Without it, the balance of hormones and other signaling molecules can be disrupted. There are rare genetic conditions that prevent some people from storing fat, and patients with these conditions often have insulin resistance and other metabolic problems similar to those seen in obesity. Extra fat is even more important for women, because their reproductive health depends on it.



Fat varies in the types of signaling molecules it produces and in the effects those molecules have on surrounding tissues.

Studies in animals have shown that saturated fats increase LDL cholesterol by inhibiting LDL receptor activity and enhancing apolipoprotein (apo)B-containing lipoprotein production [6]. This LDL cholesterol-raising effect of saturated fatty acids has been shown to depend on the level of dietary cholesterol, such that the greatest increases in plasma LDL concentrations were observed at the highest levels of dietary cholesterol [6]. In the absence of dietary cholesterol, and when polyunsaturated fatty acid intake is adequate (5%-10% of energy), saturated fat has been observed to have a negligible effect on LDL clearance in nonhuman primates, and the lipoprotein profile remains relatively normal (LDL < 90 mg/dL) [7]. When individuals or animals are fed excessive calories and dietary cholesterol, specific saturated fatty acids (particularly palmitic acid) can contribute to decreased LDL receptor activity [7]. Nonetheless, LDL receptor downregulation by dietary cholesterol greatly exceeds that by saturated fatty acids [7].

If you eat only 200 to 300 milligrams (mg) of cholesterol a day (one egg yolk has about 200 mg), your liver will produce an additional 800 milligrams per day from raw materials such as fat, sugars, and proteins.

Since cholesterol is a fat, it can't travel alone in the bloodstream. It would end up as useless globs (imagine bacon fat floating in a pot of water). To get around this problem, the body packages cholesterol and other lipids into minuscule protein-covered particles that mix easily with blood. These tiny particles, called lipoproteins (lipid plus protein), move cholesterol and other fats throughout the body.

Cholesterol and other lipids circulate in the bloodstream in several different forms. Of these, the one that gets the most attention is low-density lipoprotein— better known as LDL, or "bad" cholesterol. But lipoproteins come in a range of shapes and sizes, and each type has its own tasks. They also morph from one form into another. These are the five main types:

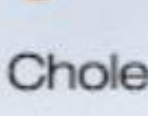
- **Chylomicrons** are very large particles that mainly **carry triglycerides** (fatty acids from your food). They are **made in the digestive system** and so are influenced by what you eat. - F G O D B A S E D
- **Very-low-density lipoprotein (VLDL)** particles also **carry triglycerides to tissues**. But they are **made by the liver**. As the body's cells extract fatty acids from VLDLs, the particles turn into intermediate density lipoproteins, and, with further extraction, into LDL particles.
- **Intermediate-density lipoprotein (IDL)** particles form as VLDLs give up their fatty acids. Some are removed rapidly by the liver, and some are changed into low-density lipoproteins.
- **Low-density lipoprotein (LDL)** particles are even **richer in pure cholesterol**, since most of the **triglycerides they carried are gone**. LDL is known as "bad" cholesterol because it **delivers cholesterol to tissues** and is **strongly associated with the buildup of artery-clogging plaque**.
- **High-density lipoprotein (HDL)** particles are called "good" cholesterol because **some of them remove cholesterol from circulation and from artery walls and return it to the liver for excretion**.

- By Julie Corliss

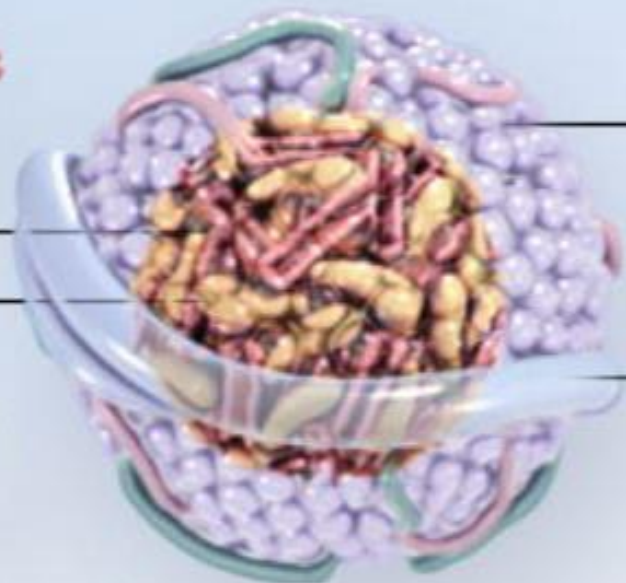
Executive Editor, *Harvard Heart Letter*

design based

Triglycerides



Cholesterol



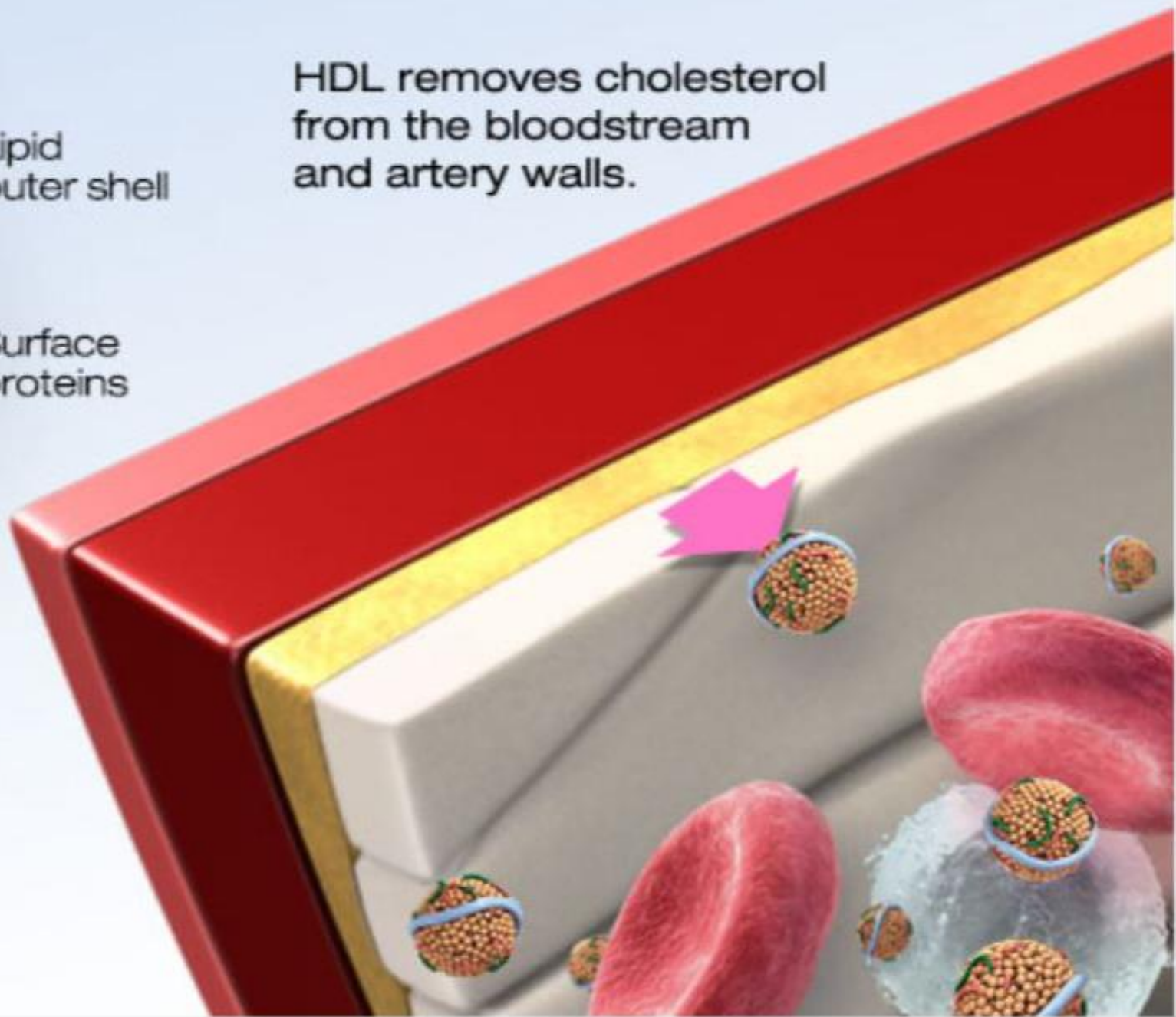
Lipid outer shell

Surface proteins

HDL removes cholesterol from the bloodstream and artery walls.

HDL

“Good” Cholesterol



VEGAN FATTY ACIDS



@plantsforfit

* CONSUME 0.5g-1g OF FATS DAILY PER KILOGRAM OF BODY WEIGHT !

RDA OMEGA 3 (ALA):

• 1.1 FOR WOMEN & 1.6g FOR MEN

RATIO: 2:1 OR 3:1 0-6 TO 0-3

GOOD FATS:

- Polyunsaturated fats
- Monounsaturated fats



AVOCADO



ALGAE (NORI)



NUTS



COCOA POWDER



FLAX SEEDS (GROUND)



CHIA SEEDS



PUMPKIN SEEDS



HEMP SEEDS



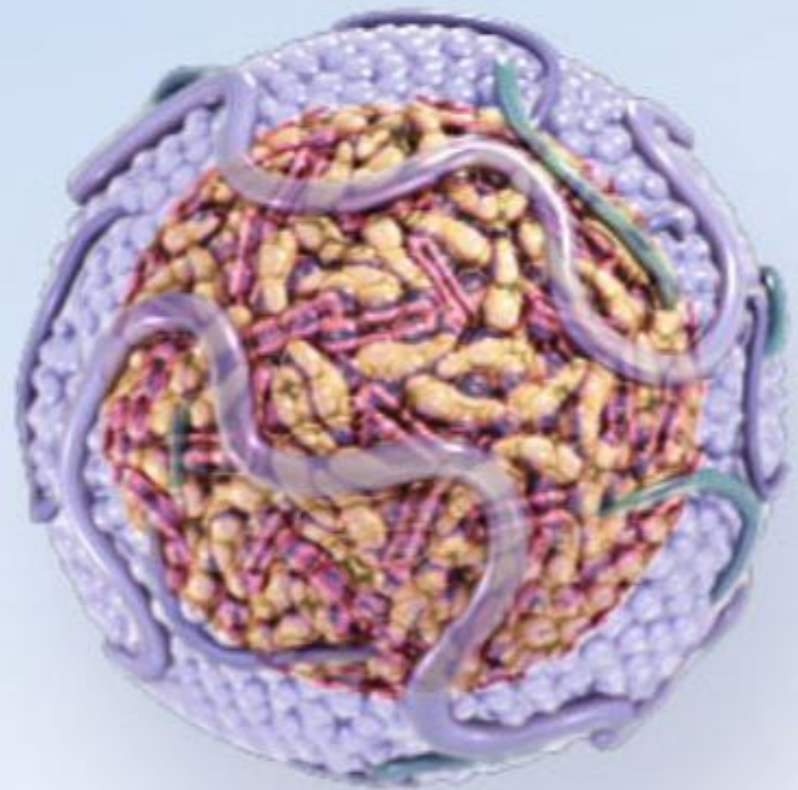
OLIVES



COCONUT

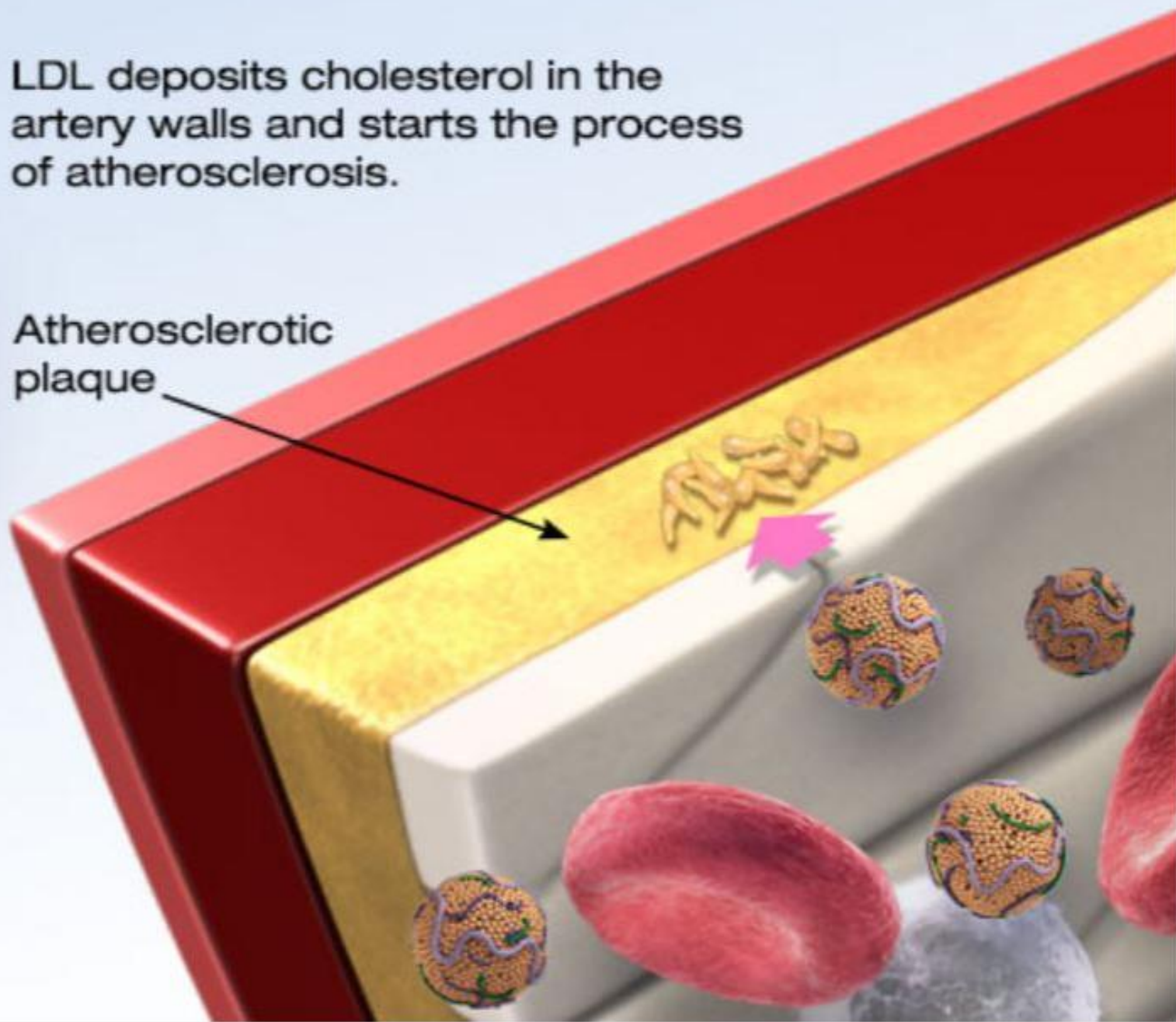


SUNFLOWER SEEDS



LDL deposits cholesterol in the artery walls and starts the process of atherosclerosis.

Atherosclerotic plaque



LDL
"Bad" Cholesterol

(2025 proposal)

sponsored by the
**Association of American Corporations for
Freedom of Choice in Food (AAC-FCF)**

Fruit and Vegetable-Based Snacks
1-2 SERVINGS



Pasta / Rice / Wonderbread
2-3 SERVINGS



Coca Cola / PowerAid / Sodas / Energy Drinks
2-3 SERVINGS

Yogurt / Cheese
Ice Cream / Milkshakes
3-5 SERVINGS



Snickers / Snack Crackers
Granola Bars / Candy
2-4 SERVINGS

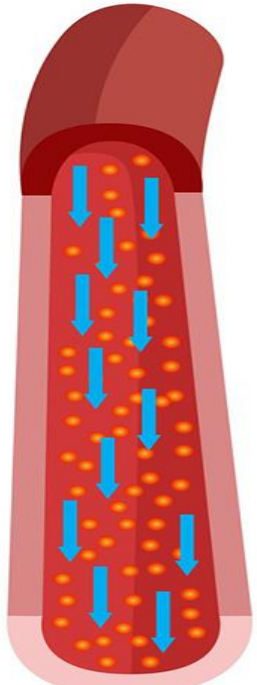
Meats and Fast Food



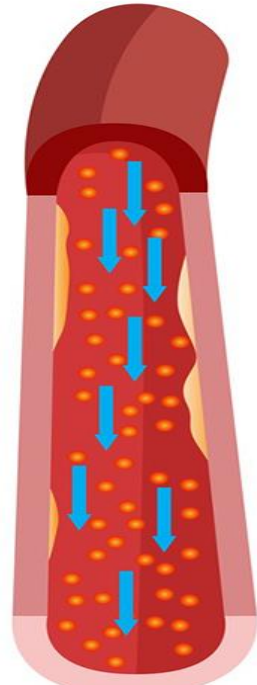
6-11 SERVINGS

Cholesterol

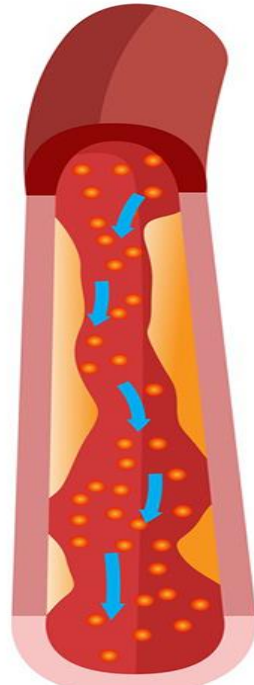
Normal Artery



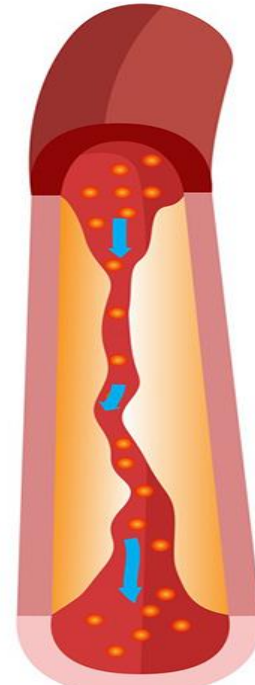
Phase 1



Phase 2

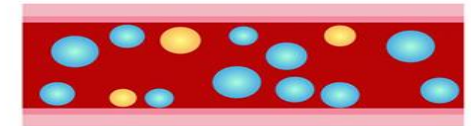


Phase 3



Phase 4

Artery Narrowed



Normal Artery



Artery Narrowed

Pro: 14:12/2 Cor 11:14/1 Cor 10:23

- **Real**

- Fats-Unsaturated- HDL
- Proteins- Plants
- Carbs- Whole
 1. Sugar- Glucose
 2. Starch- Whole/ Unrefined
 3. Fiber- Dietary

- **Soul**

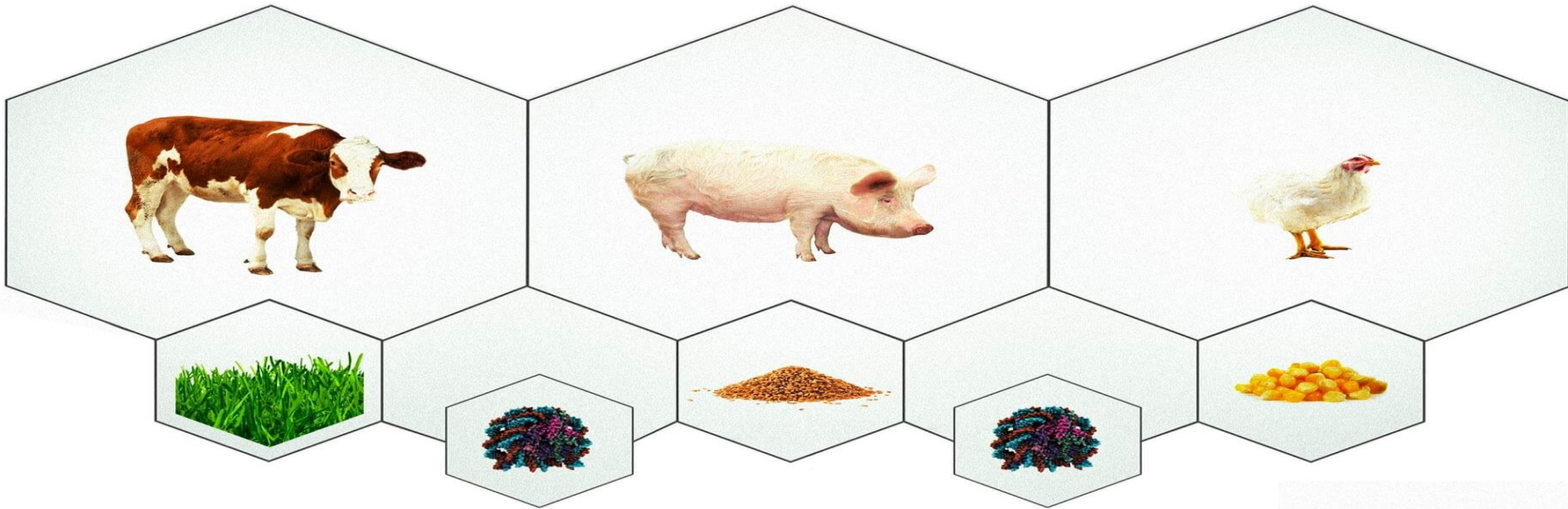
- Fats-Saturated- LDL
- Proteins- Animal products
- Carbs- Processed
 1. Sugar- Fructose, Sucrose, Lactose
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Amino acids are organic compounds made in the body which combine to form proteins

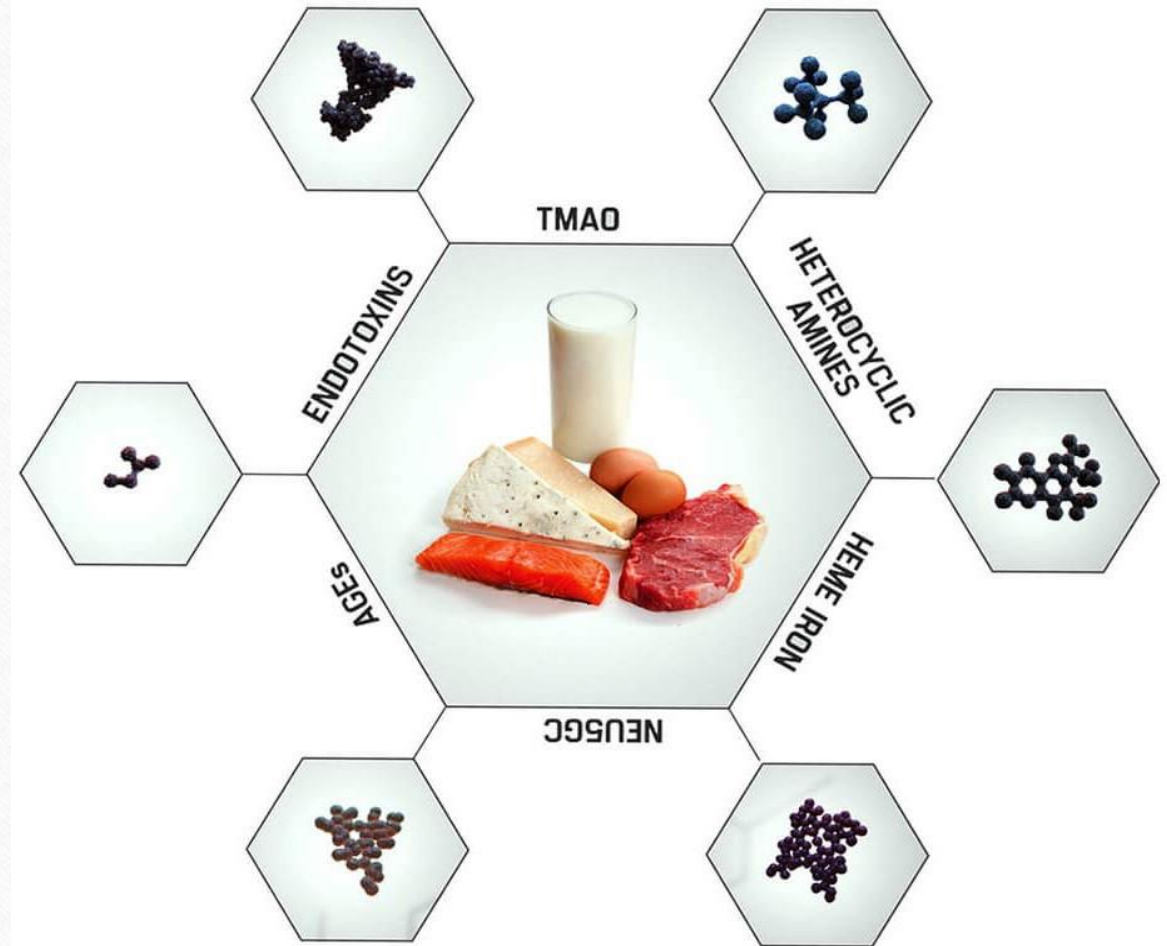
Where do animals get protein?

ADAM.



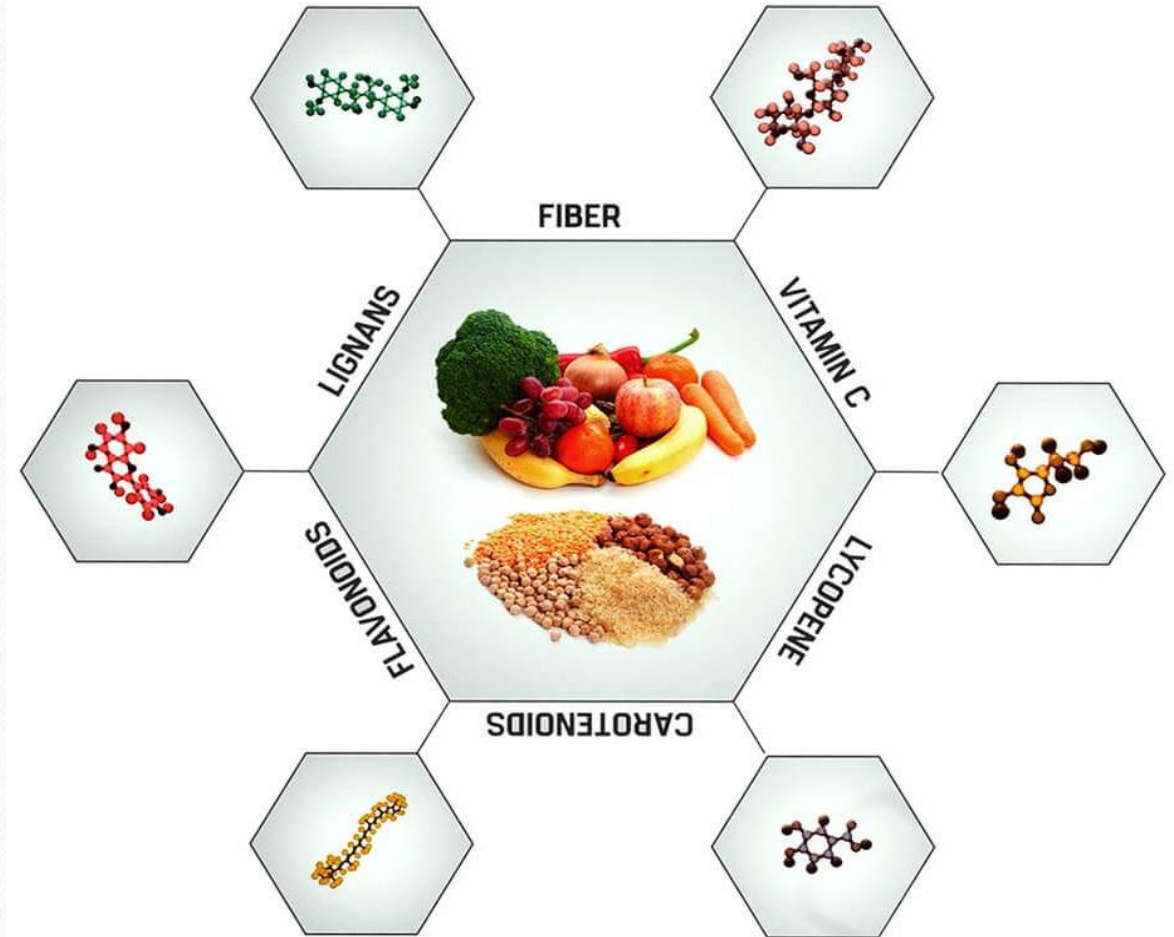
Animal Protein

- **TMAO**- A substance produced by the gut bacteria upon eating animal products, oxidized by the liver, that triggers your immune system to “turn on” inflammation.
- **Endotoxins**- inflammation and fever production as an immune response in higher organisms.
- **Heme Iron**-Iron found in meat may increase your risk of heart disease, according to a new meta-analysis published in the Journal of Nutrition.
- **Neu5Gc** - foreign molecule that generates an immune response that could potentially lead to inflammation in human tissues.
- **Heterocyclic amines**- carcinogenic chemicals that are formed when meat is being heated up, the more heat the more the carcinogenic it becomes.
- **AGEs**-Advanced Glycation End Products can promote oxidative stress and inflammation by altering the structure and function of cells in the body.



Plant Protein

- **Fiber**- Supplies gut bacteria with food for energy. Also cleaning out the digestive tract.
- **Lignans**- Lignans are bioactive compounds exhibiting various biological properties, including anti-inflammatory, antioxidant and antitumor activities.
- **Flavonoids**-Flavonoids, a group of natural substances are found in fruits, vegetables, grains, bark, roots, stems, flowers, tea that help your body function more efficiently while protecting it against everyday toxins and stressors.
- **Carotenoids**-Carotenoids are beneficial antioxidants that can protect you from disease, enhance your immune system and is essential for growth, immune system function, and eye health.
- **Lycopene**-Lycopene is an antioxidant that can protect your body against oxidative stress and some protection from certain toxins and chronic diseases.



TOP 25

Vegan Protein SOURCES CHART



nutritional yeast
5g



peanut butter
7g



flax seeds
5g



oats
6g



barley
5g



chickpeas
14.7g



lentils
16.2g



chia seeds
5g



walnuts
5g



tempeh
33.7g



edamame
18.5g



spirulina powder
2g



peas
4g



sunflower seeds
6g



pumpkin seeds
8g



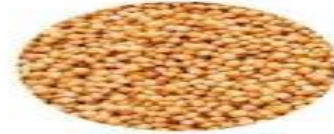
quinoa
8g



tofu
21.8g



cashews
5g



amaranth
9g



black beans
16g



kidney beans
14g



hemp seeds
9.5g



soybeans
31g



tvp
12g



almonds
6g

GUIDETOVEGAN.COM

Pro: 14:12/2 Cor 11:14/1 Cor 10:23

- **Real**

- Fats-Unsaturated- HDL

- Proteins- Plants



- Carbs-

1. Sugar- Glucose

2. Starch- Whole/ Unrefined

3. Fiber- Dietary

- **Soul**

- Fats-Saturated- LDL

- Proteins- Animal products

- Carbs-

1. Sugar- Fructose, Sucrose, High Fructose Corn Syrup

2. Starch- Refined/ Enriched

3. Fiber- Functional (extracted & added)

Carbohydrate



Sugar, Starches & Fiber

Sugar....

Many cells prefer glucose as a source of energy versus other compounds like fatty acids. Some cells, such as red blood cells, are only able to produce cellular energy from glucose. The brain uses only glucose to produce energy and function. *56-61 different names for commercial sugar. Ask me why!!!

1. **Glucose**- occurs naturally in fruits, vegetables, legumes and grains together with bran, water and fiber. This is the body's preferred source of energy because it doesn't have to be broken down as much.
2. **Processed Fructose**- Isolated from sugar beets, corn and sugar cane and concentrated, then added to commercial products. Your body takes this and converts into glucose for use.
3. **Sucrose**- A combination of processed fructose and glucose. This is table sugar. **No bran, fiber, water or minerals.**
4. **Lactose**- Combination of glucose and galactose, which the body will have to convert back to glucose in order to use.
5. **High Fructose Corn Syrup** – High fructose corn syrup (HFCS) is a liquid sweetener made from cornstarch. It is made by breaking down corn into molecules of glucose (a type of sugar). Half the glucose molecules are then chemically changed into fructose. The countries where no HFCS at all is used include India, Ireland, Sweden, Austria, Uruguay, and Lithuania

How much sugar is in your drink?

Based on the FDA standard of 4 grams of sugar per teaspoon.



Monster Energy 16 oz.
200 calories



vitaminwater 20 oz.
125 calories



Mountain Dew 20 oz.
290 calories



Snapple Lemon Tea 16 oz.
160 calories



Gatorade 20 oz.
130 calories



Nantucket Nectars Cranberry 17.5 oz.
280 calories

13.5
teaspoons

8
teaspoons

19.25
teaspoons

10.5
teaspoons

8.5
teaspoons

17.5
teaspoons

Consumption of sugar sweetened beverages may be the single largest driver of the obesity epidemic according to a 2009 study in the New England Journal of Medicine.

Average sugar sweetened beverage consumption by youth

	BOYS	GIRLS
Ages 2-5:	47 gallons/year	41 gallons/year
Ages 6-11:	65 gallons/year	51 gallons/year
Ages 12-19:	108 gallons/year	77 gallons/year

According to the 1999-2004 National Health & Nutrition Examination Survey of children who reported drinking at least one sugar-sweetened beverage on the surveyed day.

The extra calories from adding just one 20 oz Mountain Dew to your regular diet every day for a year would be enough calories to cause a 30 pound weight gain.



Based on the 290 calories in a 20 oz. Mountain Dew and 3500 calories equaling 1 lb. of weight gain.

Alliance for a
Healthier
Rhode Island

c/o Rhode Island Medical Society

This artwork was created by our colleagues from the Alliance for a Healthier Vermont. We thank them for sharing!

Click to add text

Starches:



Simple & Complex

Starches are...

Alongside fiber and sugar, starch is one of the three main categories of carbohydrates. Carbohydrates commonly found in nature and one of the sources of food energy for human beings. It is regularly eaten in the form of wheat, rice, potatoes. There are two types...

1. **Simple Carbohydrate**- mad of one or two sugar molecules. These provide quick energy but have been stripped of nutrients and fiber. Simple carbohydrates are broken down quickly by the body to be used as energy. Simple carbohydrates are found naturally in foods such as fruits, milk, and milk products. They are also found in processed and refined sugars such as candy, table sugar, syrups, and soft drinks. These are refined and/or enriched.
2. **Complex Carbohydrate**- Complex carbohydrates are polysaccharides and include starch and fiber. Complex carbohydrates, found mostly in whole plant foods, maintain their natural fiber and fuel your body with the energy it needs. Examples include beans, oatmeal, 100% whole-wheat bread, quinoa, barley, potatoes, sweet potatoes, and many other plant foods. These foods are also naturally rich in vitamins, minerals, and phytochemicals. These are whole and/or unrefined.



Soluble & Insoluble

Fiber is...

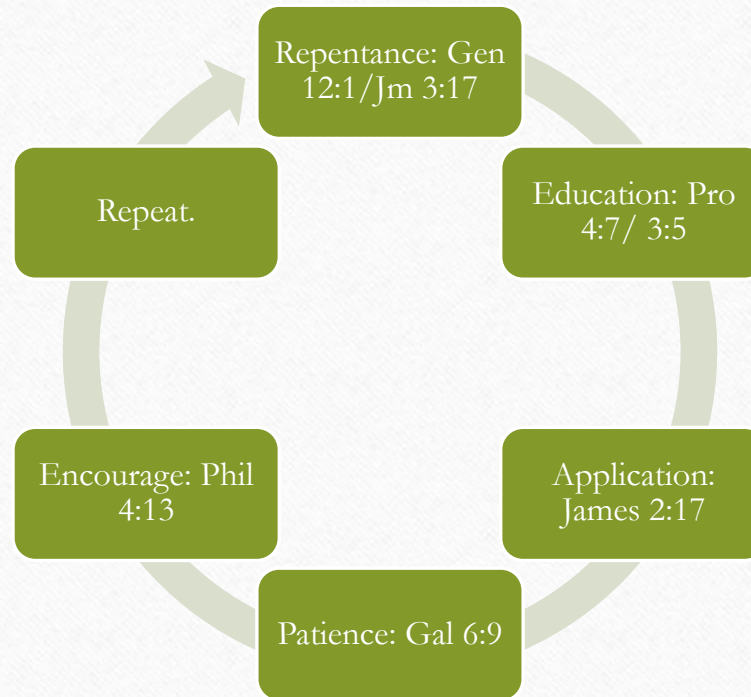
Fiber is another form of carbohydrate, that is exclusive to plants. It protects us from numerous diseases and reduces complication associated with heart and colon diseases. Furthermore it is our stomach (microbiome) preferred food source. Even though one type of fiber doesn't digest in the digestive tract, when it goes in it has numerous benefits for the body. Fiber has two (2) forms:

1. **Soluble**: This fiber is **dissolved by water** and become gel-like. It can absorb LDL cholesterol before it is digested and added to the body, inhibiting high cholesterol and its effects. According to the PCRM, "Soluble fiber acts like a sponge, soaking up waste cholesterol in your digestive tract and then whisking it out of the body. You'll find soluble fiber in oats, beans, lentils, vegetables, and some fruits."
2. **Insoluble**: Insoluble fiber **does not dissolve in water** and is left intact as food moves through the gastrointestinal tract. Insoluble fiber attracts water into your stool, making it softer and easier to pass with less strain on your bowel, while acts like a broom, cleaning your digestive tract.. Insoluble fiber can help promote bowel health and regularity.

Transition

How do we transition into eating real food?

Process of becoming a R.E.A.P.E.R



CALORIE DENSITY

WHAT 500 CALORIES LOOK LIKE

OIL



CHEESE



MEAT



POTATOES,
RICE, BEANS



FRUITS &
VEGGIES



...and why whole plant-based foods will help keep you lean and satisfied.

forksoverknives.com

Thank you



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