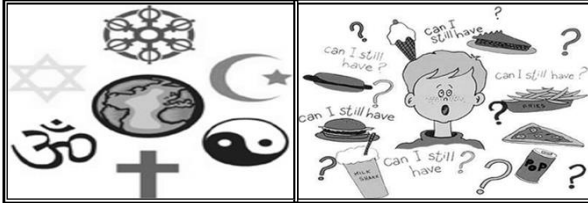


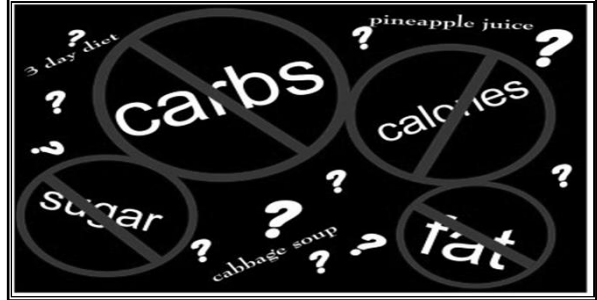
Paleo, Yes, No or Maybe So?

DIETS ARE LIKE RELIGIONS

- Someone thinks theirs is right.
- Someone wants to convert you.
- At their core, they all have some commonality.



FIRST 3 LETTERS OF DIET IS DIE!



THE MEDIA IS APPEALING!

100 a day
You're gonna love this New York!

Attention: Women And Men...
Discover how to Lose 10 lbs in 10 Days!!

I LOST \$350 IN TWO WEEKS. Ask me now!

FREE Eat Candy & Lose Weight POWER PODS
Suppress Appetite! Boost Your Energy!

THE TRUE STORY!

INFORMATION OVERLOAD! MASSIVE OPTIONS & CONFUSION!



PALEO...SO WHATS THE DEAL?

- Premise:** Template of foods optimal for your body.
- AKA:** Ancestral, Primal, Evolution & Caveman Diet.
- Not about reenacting the lives of hunter-gatherers.
- Not one size fits all. **Eat real food of our ancestors.**



REAL FOOD OF OUR ANCESTORS?

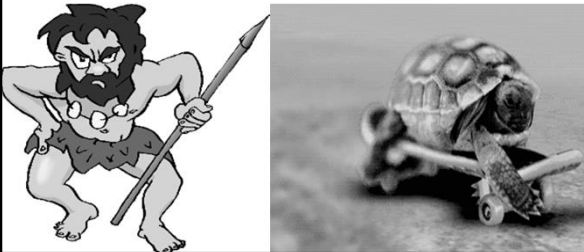
- Could you make it yourself?
- Does it have an ingredient list?
- Can you recognize all the ingredients as food?
- Gluten, grains, soy, peanut, legumes, dairy or sugar?




Paleo, Yes, No or Maybe So?

REALITY CHECK


- Our ancestors hunted naked with a sharp stick!
- Our ancestors ate berries, squirrels, rats & mice!



PALEO FOODS FOR THOUGHT


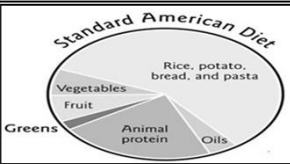


PRIMITIVE EATERS



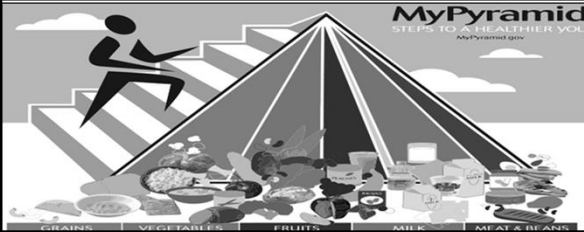
NUTS
FRUIT
VEGETABLES
MEAT / EGGS / FISH

MASSIVE DIFFERENCE!

Standard American Diet

Rice, potato, bread, and pasta
Vegetables
Fruit
Animal protein
Oils
Greens

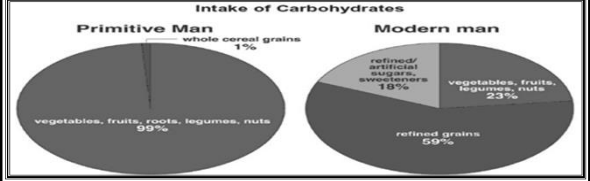


MyPyramid
STEPS TO A HEALTHIER YOU
MyPyramid.gov

GRAINS | VEGETABLES | FRUITS | MILK | MEAT & BEANS

PALEO ADVOCATES

- The science of what our pre-historic ancestors ate, before the development of civilization & agriculture.
- **General Dietary Premise:**
- We should not eat agriculturally produced foods.
- Biologically, we have not evolved past the Paleo Era.

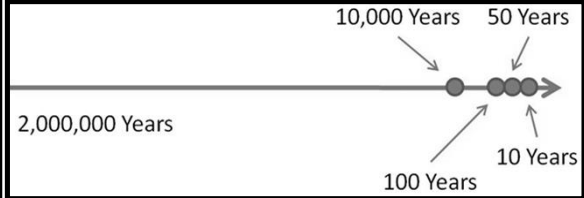


Intake of Carbohydrates

Category	Primitive Man	Modern man
whole cereal grains	1%	refined grains: 59%
vegetables, fruits, roots, legumes, nuts	99%	vegetables, fruits, legumes, nuts: 23%
refined/artificial sugars, sweeteners	0%	18%

PALEO ADVOCATES

- 10,000: Agriculture, grains & dairy.
- 100: Canning, pesticides, processed flour & sugar.
- 50: Processed, convenience, fast-food & TV dinners.
- 10: Genetically modified, hormones in meats & stress.



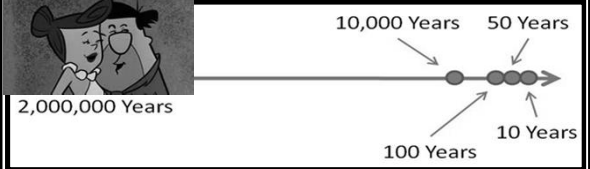
10,000 Years 50 Years

2,000,000 Years

100 Years 10 Years

PALEO ADVOCATES

- The Standard Diet+2 Million Years in the Making!
- Hunters and gatherers did not suffer from chronic disease, diabetes, arthritis, heart disease or cancer?
- 2,000,000: Hunting & gathering meats, veggies & fruit.



10,000 Years 50 Years

2,000,000 Years

100 Years 10 Years

PALEO ADVOCATES

- Can this dietary philosophy avoid chronic disease?
- **Disease:** The result of processing foods made edible?



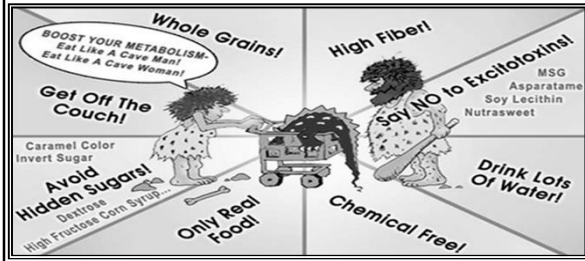
HOW IT BEGAN

- 1975, The Stone Age Diet.
- Seattle Gastroenterologist Walter Voegtlin, M.D.
- Noticed similar GI tracts of carnivores & humans.
- **Findings:** GI issues from ↑ CHO carnivores never ate.



PALEO LEADERS

- Loren Cordain, Ph.D, Colorado State University.
- Professor, Department of Health & Exercise Science.



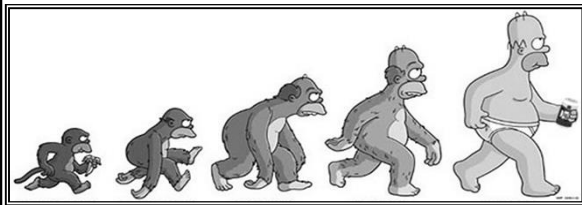
LOREN CORDAIN PALEO DIET

- **PRIMARY:** 7-14 eggs weekly.
- Lean meats, fruits, veggies, nuts & seeds.
- Eat fruits, veggies, seeds & olive oil with every meal.
- **MODERATION:** Coffee, alcohol, dried fruit & all nuts.



LOREN CORDAIN PALEO DIET

- **AVOID:** Dairy, grains & starchy veggies.
- Soft drinks, fruit juices, candy, honey & sugar.
- Processed meat, canned goods & condiments.
- Legumes, beans, peas, peanuts & soy products.



PALEO LEADERS

- Robb Wolf, CSCS, Biochemist, Chico, California.
- Owner of NorCal Strength & Conditioning Gym.



Paleo, Yes, No or Maybe So?

ROBB WOLF PALEO SOLUTION

- **OILS:** Virgin olive & coconut.
- **GRUB:** Various meats, fruits, veggies & nuts.
- **NUTS:** Macadamia, almond, pecan & walnuts.
- Ribeye, ribs, pork chops, & **extra fat bacon** are ok.
- ↑ local, organic, grass-fed, wild-caught meats & fish.



ROBB WOLF PALEO SOLUTION

- **BIG** emphasis on grass-fed & no nitrates.
- **Nitrates:** Widely used in preserving meats.
- Comes in a freezer or in a box, probably a no no!



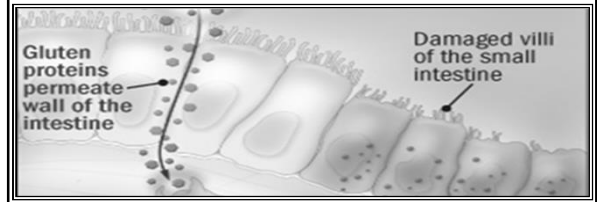
ROBB WOLF PALEO SOLUTION

- **DRINK:** H2O, coffee & tea.
- **MODERATE STARCH:** Squash, yam & sweet potato.
- **AVOID:** Dairy, cereal, grain, legumes, soda, fruit juice, ↑ salt foods, candy, honey, sugar & sweets.



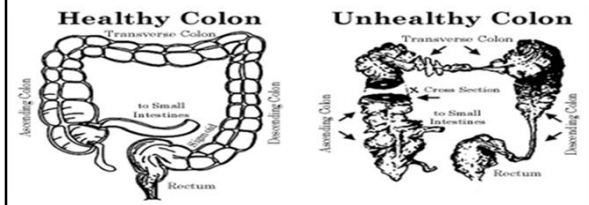
AUTHORS COMMONALITIES

- If you can kill it or forage itō Bon Appétit!
- **Premiseō** Gluten products cause inflammation!
- Shift CHO sources to things that are not gut irritating.
- No grains, legumes dairy & processed vegetable oils.



GLUTEN

- Protein in most grains, wheat, barley, rye & oats.
- Very hard to digest & **can** ↓ intestinal absorption.
- Can ↑ leaky gutō incomplete digested compounds.
- Should stay in your gut (pooh!) enter your bloodstream.



AUTOIMMUNITY & LEAKY GUT

<u>Disease</u>	<u>Tissue/Organ</u>
Autism	Nerve/Brain
Arthritis	Joints
Rosacea	Skin
Psoriasis	Skin
Hashimoto's	Thyroid
Celiac Disease	Gut
Ulcerative Colitis	Gut

AUTHORS COMMONALITIES

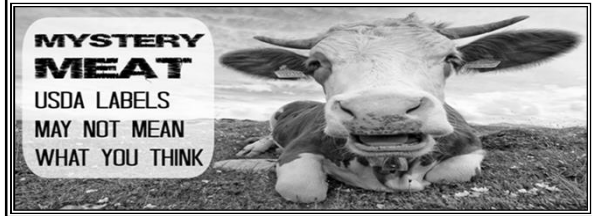
- No serious PITA morals.
- Fattier cuts like bacon & ribs.
- Moderate to ↑ high animal protein.

- Variety of poultry, seafood, red meats & eggs.
- Wild or grass-fedō “all natural & no hormones”



NATURAL LABELS

- **FDA & USDA** "natural+ loosely defined:
- Leaves lots of room for things to sneak in.
- No added color, artificial flavor or synthetic substance.



HORMONE FREE LABELS

- No hormone beef label must say:
- %Sufficient documentation provided to the agency+

- No hormone pork or poultry label must say:
- %Federal regulations prohibit the use of hormones+

- **Going to spend more \$\$...Make sure it's worth it.**



OTHER LOOSE LABELS

- **Organic:** Access to outdoors.
- Fed organic, no antibiotics or hormones.

- **Free Range Poultry:** Access to outdoors.

- **No antibiotics red meat & poultry:**
- Documentation of animals raised without antibiotics.



Supplement Facts

Serving Size - 4 Tablets
Servings Per Container - 60

	Amount per Serving	% Daily Value
Thiamin (Vitamin B-1 as benfotiamine)	25 mg	1667%
Vitamin B-6 (as Pyridoxal-5-phosphate)	5 mg	250%
Elemental Magnesium (as dimagnesium malate)	500 mg	125%
Malic Acid (as dimagnesium malate)	1550 mg	1

1 Daily Value not established
Other Ingredients: Microcrystalline cellulose, modified cellulose, guar gum, stearic acid, xanthan gum, vegetable stearate, silica.

silica:
sand

xanthan gum:
thickening agent & stabilizer

microcrystalline cellulose:
refined wood pulp

modified cellulose:
filler
guar gum:
food thickener & binder

stearic acid:
fatty acid that is used in making candles, and softening rubber

vegetable stearate:
potentially dangerous lubricant

WHY NOT LECTINS?

- Proteins found in animals (us too) & plants.
- Lectin helps control protein levels in humans.

- Lectin is part of plants arsenal of protection.
- Deter the predator from coming back for more.

LECTIN
free diet:

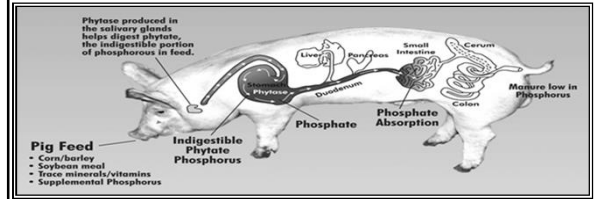
WHY NOT LECTINS?

- ↑ in seeds, grains, legumes, soy & nuts.
- Ingested **can** cause intestinal & gut irritation.
- Plant lectins irritate the digestive system so you don't digest its seeds.
- Seeds are needed for reproduction & survival.



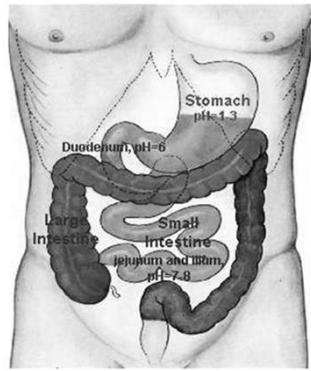
NO PHYTIC ACID & PHYTATES

- Anti-nutrient in plant-based foods.
- Fruits & vegetables have almost none.
- Grains & legumes have ↑ phytic acid content.
- We don't have phytase enzyme to break it down.



NO PHYTIC ACID & PHYTATES

- Binds to minerals ↓ absorption.
- Cal, mag, iron & zinc deficiency.
- Deficiency leads to ↑ PMS, fatigue & muscle cramps.



SOAKING

- Soaking ↑ AA availability.
- **Neutralizes** phytic acid, ↑ absorption.
- ↑ Cal, Mag, Iron & Zinc. ↑ vitamin A, B, & C uptake.



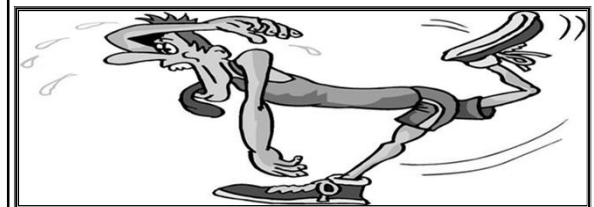
PHYTIC ACID PER 100 GRAMS

- White flour 300
- Corn 370
- Bran muffin 500
- Lentils 780
- Oatmeal 940
- Oat Flakes 1200
- Avocado 18
- Broccoli 16
- Collard Greens 15
- Strawberries 12

Nut	Phytate mg/100 g
Walnut	982
Almond	1138
Peanut: roasted	952
Peanut: ungerminated	821
Peanut: germinated	610
Hazelnuts	648
Brazil nuts	1719
Coconut	357

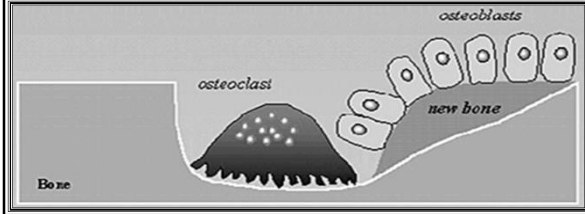
SOME ↓ NUTRIENTS IN GRAINS

- Grains lack Beta-Carotene & B12.
- Zinc, copper & magnesium ↓ in grains than animal.
- Grains enriched with iron is non-heme, ↓ absorption.



SOME ↓ NUTRIENTS IN GRAINS

- Protein in grains are incomplete.
- Lack Lysine & low in Threonine, two essential AA.
- Grain products have high phosphorus to calcium ratio.



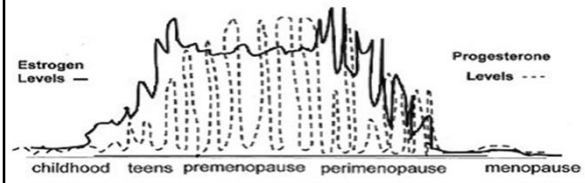
WHY NO MILK?

- Milk was not on the Stone Age Menu!
- IGF (insulin-like growth factor) is in milk.
- Name implies, promote growth of baby cows.
- ↑ blood concentration of IGF **can** promote acne.



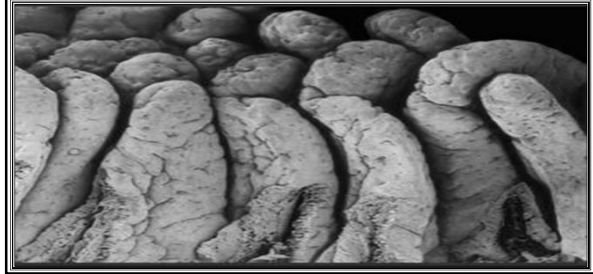
WHY NO MILK?

- Cows produce milk ~ 6 months, inseminate 10 months.
- Pregnant cow milk has **about 4 times more estrogen.**
- Hormone imbalance **can** lead to PCOS, weight ↑, amenorrhea, excessive thinning or hair growth & acne.



SMALL INTESTINE

1. **90%** of absorption takes place here.
2. About 22 feet long X 1 inch in diameter.
3. **Villi:** tongue-shaped projections, help absorption.



Does it Really do a Body Good?

Pros

- Calcium is a main advertised benefit of milk.
- Vitamin D and B12
- Can help weight loss?

Cons

- Creates mucus.
- Creates weight gain.
- Causes acne.
- Contains hormones, saturated fat, lactose.
- Composition depends on cow health and treatment, lactation cycle and frequency, cow feed, pasteurization and milk processing plus other things.
- By the time it gets to your table is it really cow's milk?

Almond Milk as Comparison home-made kind

Pros

- Almonds considered super foods for their antioxidant properties.
- High in Vitamin E
- Less calories than milk.
- Less processing, more natural.
- High Fiber drink.
- No Cholesterol
- Contains Healthy Fats

Cons

- Texture can be a bit grainy unstrained.

The Way Nature Intended

PALEO & DAIRY

- The bottom lineō avoid all dairy on Paleo.
- Milk, butter, cream, yogurt, ice cream & cheese.
- Humans are the only specie to drink milk after infancy.



WHY SO MUCH FAT?

- Fats ↑ absorption of fat-soluble A, D, E & K.
- Coconut & palm oil contain anti-microbial properties.
- Lauric & capric acid kill bacteria, viruses & parasites!

The Amazing Health Benefits
of Coconut Oil

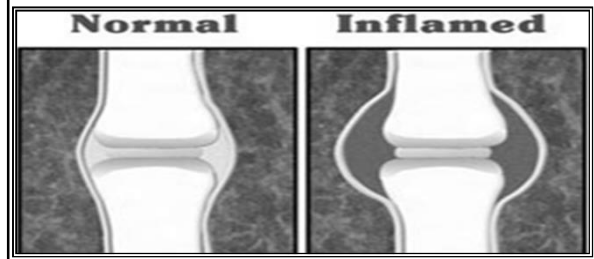


↑ OMEGA 3 & ↓ OMEGA 6

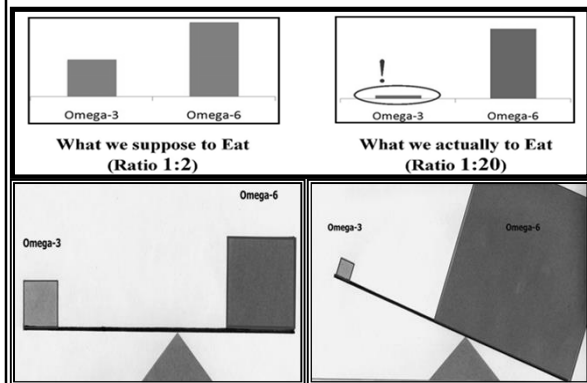
Oil	Omega-6 Content	Omega-3 Content
Safflower	75%	0%
Sunflower	65%	0%
Corn	54%	0%
Cottonseed	50%	0%
Sesame	42%	0%
Peanut	32%	0%
Soybean	51%	7%
Canola	20%	9%
Walnut	52%	10%
Flaxseed	14%	57%
Fish*	0%	100%

↑ OMEGA 3 & ↓ OMEGA 6

- ↑ omega-6 content associated with inflammation.
- Inflammation is the root cause of chronic diseases.
- (Cardiovascular, arthritis & autoimmune diseases)



1 -20 RATIO IS SAD!



A MISUNDERSTOOD FRIEND?

- LARD
- 47% monounsaturated, ↑ HDL & ↓ LDL.
- 40% is saturated BUT 1/3 is stearic acid that ↑ HDL.
- Stearic acid has no effect on LDL (neutral).
- Paleo advocatesō 1/3 of the fat in lard improve lipids?



PALEO PROTEIN PHILOSOPHY

- It can't be overeaten. **Hum?** ~ ½ -1g per lb/bw daily.
- A ton of phosphorus! ♂ adults need ~ 700 mgs daily.
- Body has ~ 1% to help balance calcium intake ratio.

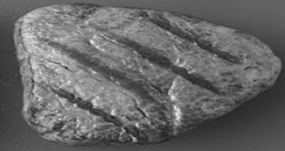


Carter, K. (2012) J of Med Calcium Depletion in High Protein Intake V39-54

PALEO PROTEIN PHILOSOPHY

- Many clinical trials show ↑ phosphorus = ↓ calcium.
- Phosphorus ↑ calcium in the urine between 10 & 20%.

Food	Beef Liver	Beef Round	Chicken Breast	Ham	Duck	Pork
Phosphorus per 3oz	410mg	230mg	225mg	225mg	225mg	220mg



Carter, K. (2012) J of Med Calcium Depletion in High Protein Intake V39-54.

PROTEIN FACTS

- 22 AA are available from plant food.
- LOTS of protein with animal & plant foods.
- Need ~ 5-6% Kφ in AA to replace excretion.
- What has more protein per K: Sirloin or Broccoli?



PROTEIN IN VEGGIES

- Cows eat grass! Greens pack a protein punch.
- Big animals (elephant, gorilla, hippo) eat mostly greens.

Food	Sirloin	Broccoli	Romaine Lettuce	Kale	Spinach	Sweet Potato
Protein/g per 100 k's	9.4	11.6	11.2	9.6	12.2	4.2



Fuhrman, J. (2009). *Eat to Live*. New York: Little, Brown and Company.

PROTEIN FACTS

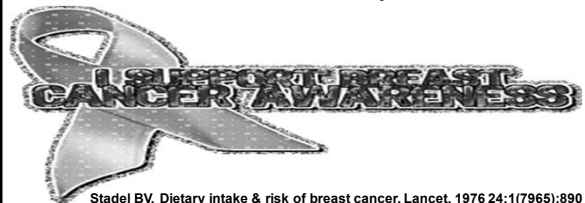
- Intake ~ 35% or ↑ **can be** associated with:
- ↑ cholesterol, osteoporosis & kidney stones.



Markus, E. (2011). *The New Ethics of Eating*. Ithaca: McBooks Press

BREAST CANCER FINDINGS

- Highest rate in countries with ↑ meat consumption.
- American women ♂ ..1 in 10 chance of development.
- Deaths related to:
 - ↑ fat intake, ↑ cholesterol & ↓ fiber.**All associated with ↑ animal protein.**



Stadel BV. Dietary intake & risk of breast cancer. *Lancet*. 1976 24;1(7965):890

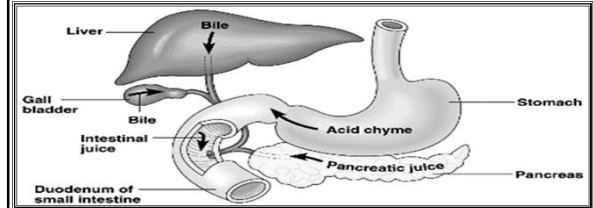
PROTEIN INTAKE

- **Females:** ~ 1 gram per kg/bw daily.
- **Female Athletes:** ~ 1.2 to 1.5g per kg/bw daily.
- **Males:** ~ 1.5g per kg/bw daily.
- **Male Athletes:** ~ 1.5 to 2g per kg/bw daily.
- **High BV.**



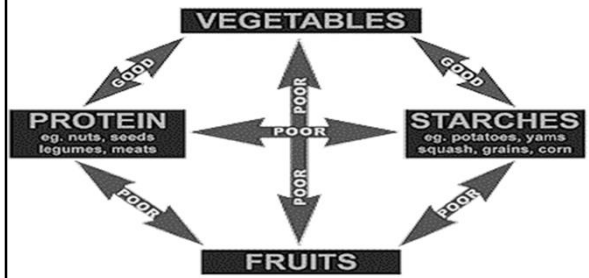
PROTEIN DIGESTION

- Protein is **not** digested in the mouth. Stomach acids used to convert to AA's.
- Different foods digest at different rates.
- **Speed of digestion:** sugar, starch, fat then protein.



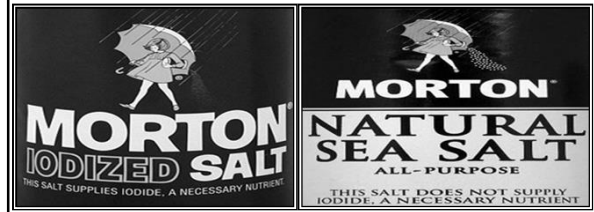
NUTRIENT DIGESTION

- Starch digests quickly, protein takes time!
- Combined, protein putrefies & sits in the intestines!



USE SEA NOT IODIZED...HUM?

- Sea salt used in cosmetics.
- Made from evaporated seawater.
- Iodized salt adds iodide (a form of iodine).
- Iodine deficiency **can** lead to thyroid issues.



ESTROGEN & THYROID LEVELS


- Estrogen ↑ fat storage during puberty & pregnancy.
- Other hormones ↑ fat storage.
- Glucagon - secreted by the pancreas.
- Epinephrine - secreted by the adrenal gland.
- Norepinephrine - secreted by nerve endings.
- Fluctuating hormones can alter thyroid function!
- **T3 & T4 levels determine proper thyroid function.**
- **T3 → 2-4mcg/dl** **T4 → 4-12mcg/dl**


TRIDO-THYRONINE & THYROXINE

- AA tyrosine based hormones.
- **Iodine required** to produce T3 & T4.
- T3 & T4 helps control CHO, fat & protein metabolism!




FUNCTIONS OF IODINE


- Helps regulate cortisol!
- ↑ quantity in breast tissue.
- Low levels ↑ the risk of breast cancer. 
- Unborn baby gets vitamins & minerals first.
- After children, iodine reserves can be **depleted**.
- Sacrifice your own well being! Motherhood is tough!



SOURCES & HOW MUCH

- **FISH**, Dulce, Kelp, Hiziki, Arame & Kombu.
- Dairy, potatoes, strawberries, cranberries & veggies.
- **RDA**: 150 mcg/day, pregnant 220, breastfeeding 290.






Stadel BV. Dietary iodine and risk of breast cancer. Lancet. 1976 24;1(7965):890-1

PROBIOTIC

- Today, antibiotics are in the meat we eat.
- Ancestors ate dirtō no antibiotics in the Stone Age!
- Tough to replenish good flora w/o fermented foods.
- Yogurt, cheese, fermented veggies, fish **or SUPPS!**

Friendly Bacteria
L. acidophilus, L. salivarius,
L. casei, L. thermophilus,
B. bifidum, B. longum, etc.

Unfriendly Bacteria
Pathogenic bacteria & fungi,
such as Candida albicans, etc.




ALCOHOL PALEO STYLE

- Be honest. For some, it's hard to give up the booze.
- **IT'S BEEN HELPING US HAVE SEX FOR DECADES!**


Following the Paleo Diet has become much easier with the news that the earliest known winery was in a cave.


ORGANIC WINE IS GLUTEN FREE




OPTIONS

- Gluten free beer & cider.
- Bards made from sorghum & Woodchuck from apple.
- **Liquor is quicker!** Soda water, lime & agave tequila.







2012 US News & World Report

Credentials	1975 Stone Age Diet+by Walter Voegtlin Ph.D. Currently Loren Cordain, Robb Wolf & others.
Claims	Human genetics are un-changed since current agriculture. Ideal for human health & well-being.
Calories	No count, & could be ↓ calcium. Not suitable for vegans or vegetarians.
Sustainability	50-65% lean meat hunted or grass fed & 35-45% from plant food. Caution: Store foods could have growth hormone, antibiotics, pesticides, heavy metals & fatty acids from grain fattening.
Weight loss	Varies on K☿ intake.
Research	2012 US News & World Report ranked it lowest of 20 diets evaluated based on factors including health, weight-loss and ease to follow.