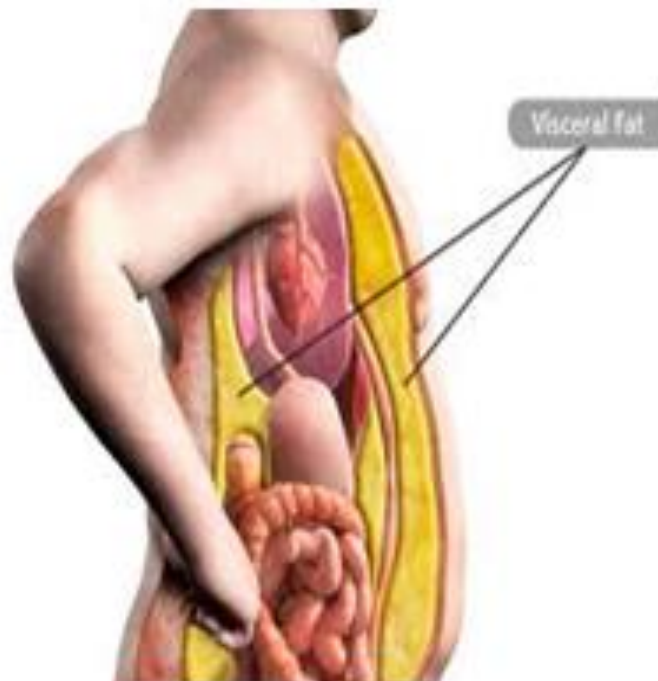


# Types of Fat

**Subcutaneous Fat – Good Fat**



**Visceral Fat – Bad Fat**



# Which is Best Fat To Have? Fat and Fit – or Thin and Skinny Fat

**Fat and Fit**



**Skinny Fat**



# Being Fat is not always Unhealthy



- One in three obese patients are metabolically healthy (normal blood tests) called obesity paradox.
- They have same risk of heart disease as skinny individuals.

# Inaccurate Ways to Measure Visceral Obesity

## Tape Measure



## BMI (Body Mass Index)

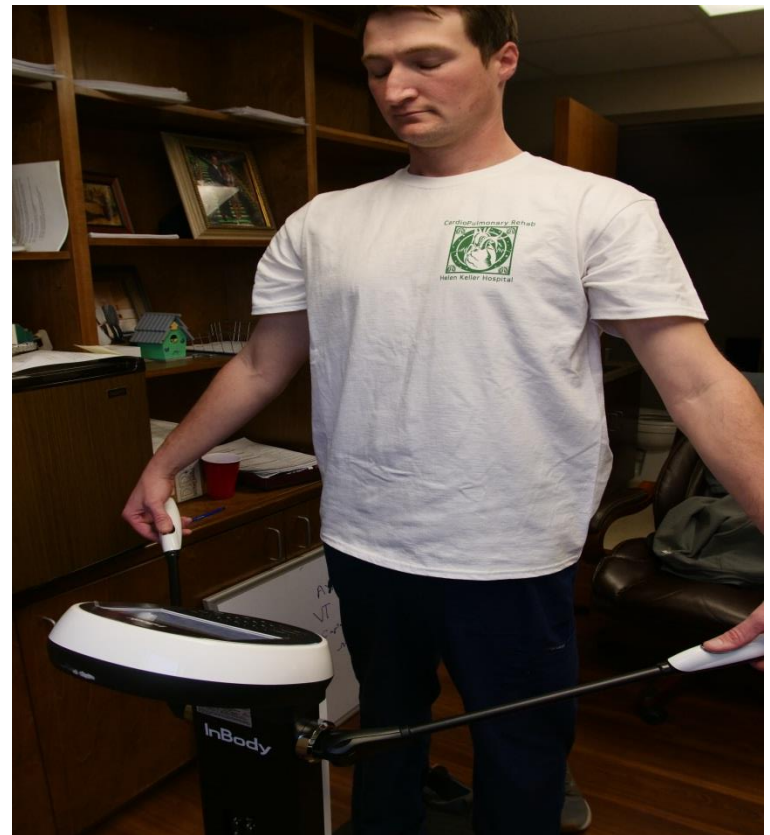




# InBody Test – Helps to Think Fat Loss, Not Weight Loss

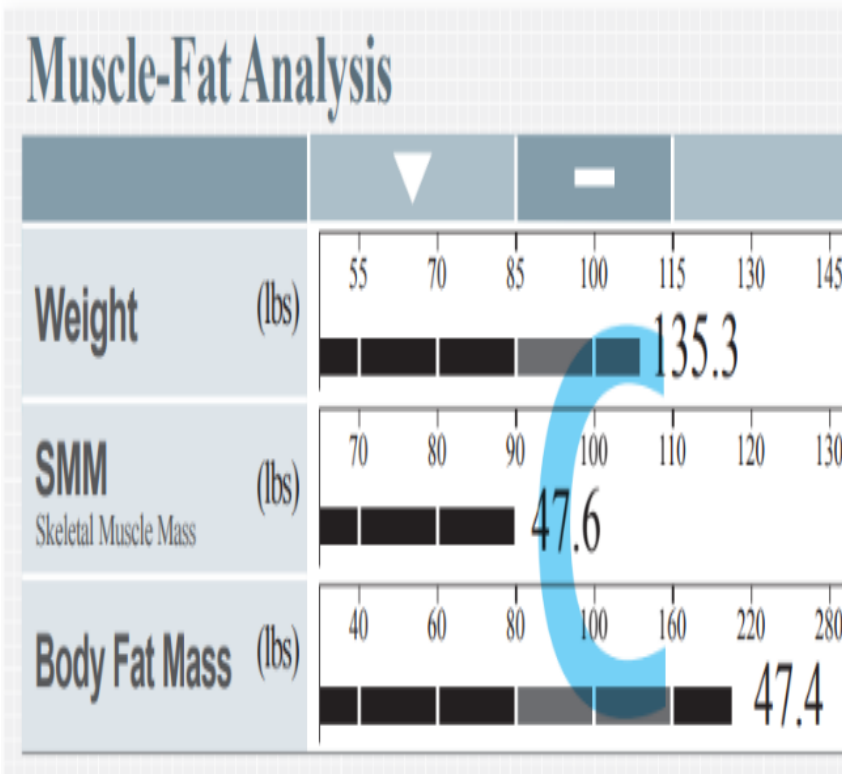
**Tells about fat, muscle and water**

**Shows true strength and  
weakness**

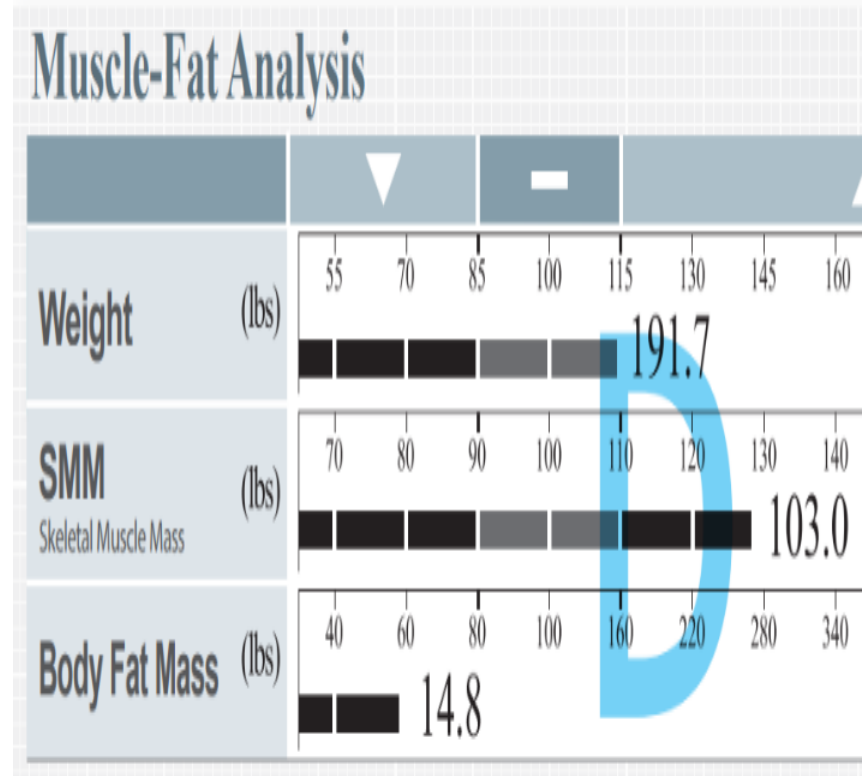


# InBody Analysis

## C- Shape – Need to lose fat



## D – Shape – Good Health

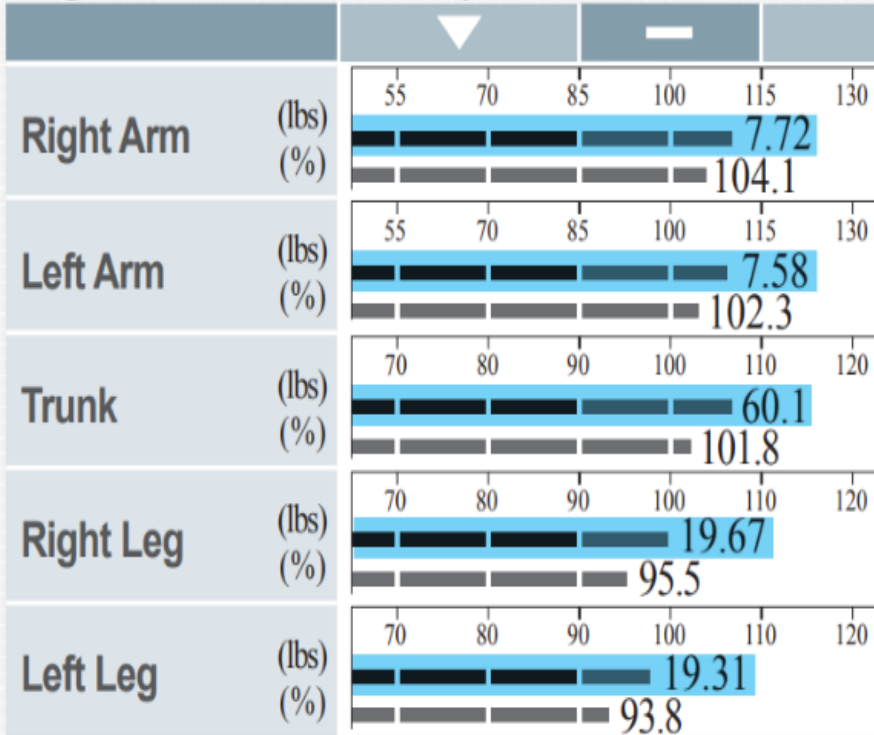


# Inbody Analysis

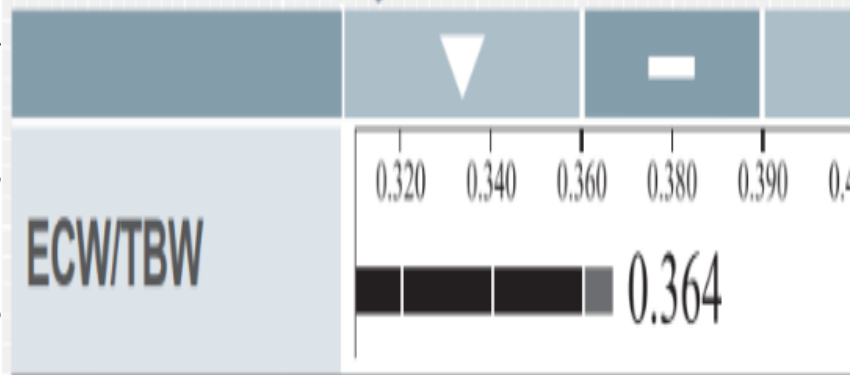
Legs are weaker than upper body

Extracellular vs Intracellular Water

## Segmental Lean Analysis



## ECW/TBW Analysis



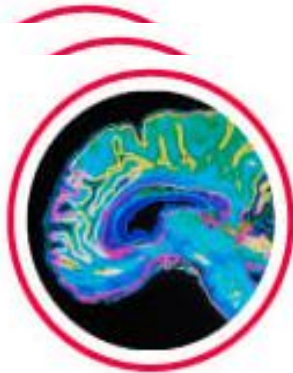
# Why is Visceral Fat so Dangerous?



Heart disease



Cancer



Stroke



Dementia



Diabetes



Depression



Arthritis



Obesity



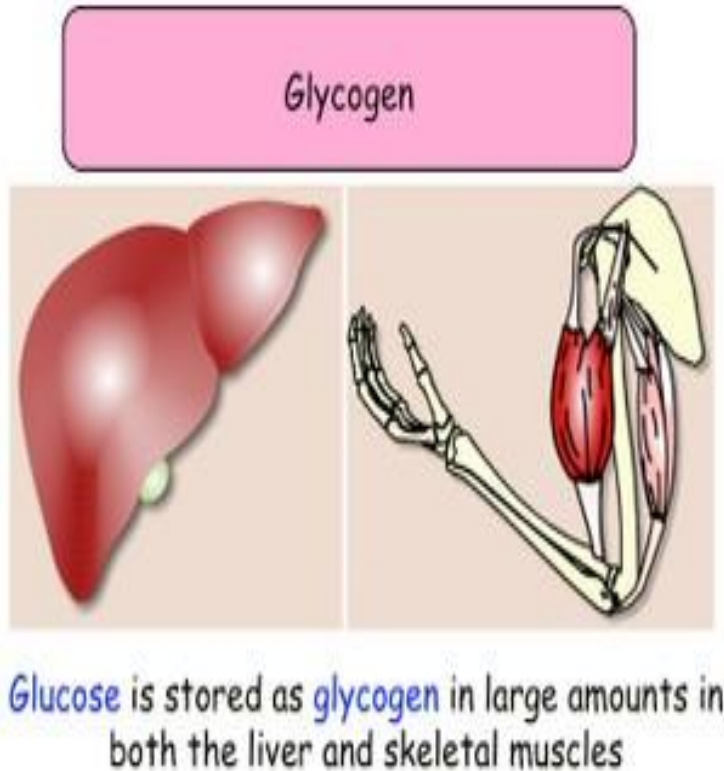
Sexual  
dysfunction



Sleep disorders



# How Does Visceral Fat Develop?



- If too much glucose is in our blood stream and our glycogen stores in the liver and muscle are full, glucose will be stored as fat.
- Glucose triggers the release of insulin which stores fat.

# Insulin Level – The Test your Doctor did not order

- It picks up insulin resistance early
- HBA1C and blood sugar may be normal when insulin level is elevated
- A level less than 5, means you are healthy
- Too much glucose causes a high insulin level, which produces inflammation which is the cause of most diseases (CAD, Stroke, Fatty liver, Dementia, Diabetes, Depression, Arthritis, Obesity, Sexual dysfunction and Sleep Disorders)

# Clay - Labs – Insulin level

PATIENT: MALONE, CLAYTON NATHANIEL		ACCT
REG DR: Williams, Jerry		AGE/S
		DOB:
		STATU
----- CHEM		
Date	MAY 2	
Time	0937	
> TP	7.4	
> ALB	4.7	
> GLOBULIN	2.7	
> BILI.T	0.7	
> D.BILI	< 0.1 L	
> ALT	20	
> AST	19	
> ALK.P	51	
> TRIG	220 H	
> CHOL	270 H	
> HDL CHOL	44.0	
> NON-HDL	226 (A) H	
(A) OPTIMAL:	LESS THAN 130	
BORDERLINE HIGH:	139-159	
HIGH:	160-189	
VERY HIGH:	OVER 190	
> LDL, CAL	182 (B) H	
(B) OPTIMAL:	LESS THAN 100	
NEAR OPTIMAL:	100-129	
BORDERLINE HIGH:	130-159	
HIGH:	160-189	
VERY HIGH:	OVER 190	
> VLDL	44 H	
> LDL/HDL	4.14	
> CHOL/HDL	6.14 (C)	

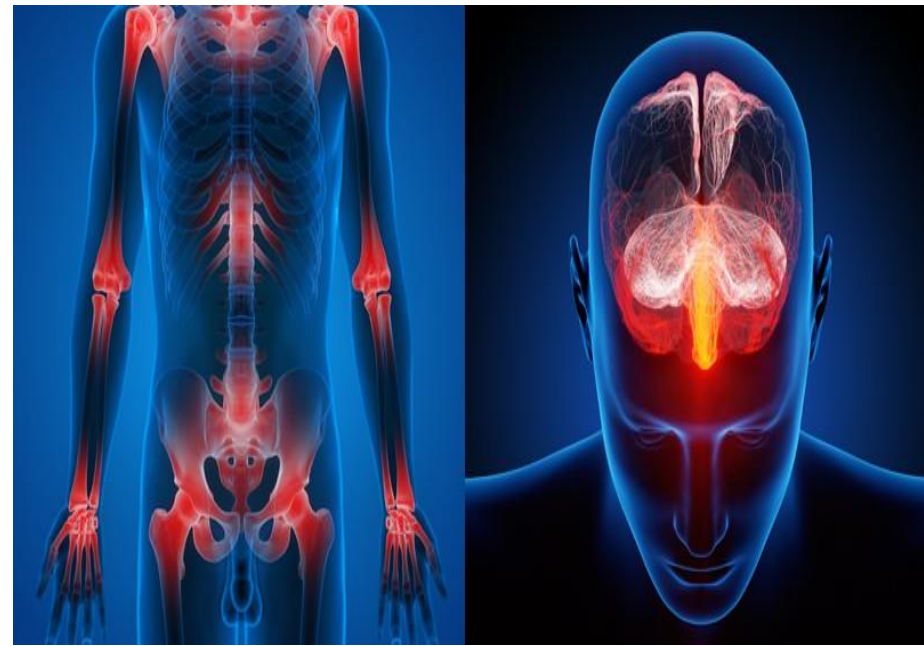
Patient: MALONE, CLAYTON NATHANIEL		#K0112985
Test	Day Date	Time Result
=> INSULIN-T	1 MAY 2	0937 14 (a)
PATIENT: MALONE, CLAYTON NATHANIEL		ACCT #:
REG DR: Williams, Jerry		AGE/SX:
		DOB:
		STATUS:
----- CHEMI		
Date	FEB 24	
Time	0724	
> INSULIN	4	

# Inflammation – Acute vs Chronic

**Acute inflammation with pain, redness, swelling and heat**



**Chronic Inflammation**





Sugar, High Fructose corn syrup

Fast foods, commercial baked foods, Fried foods and smoking  
(Oxidize LDL – Turn LDL Rancid) – **Foods that Increase Inflammation**

## Vegetable Oils



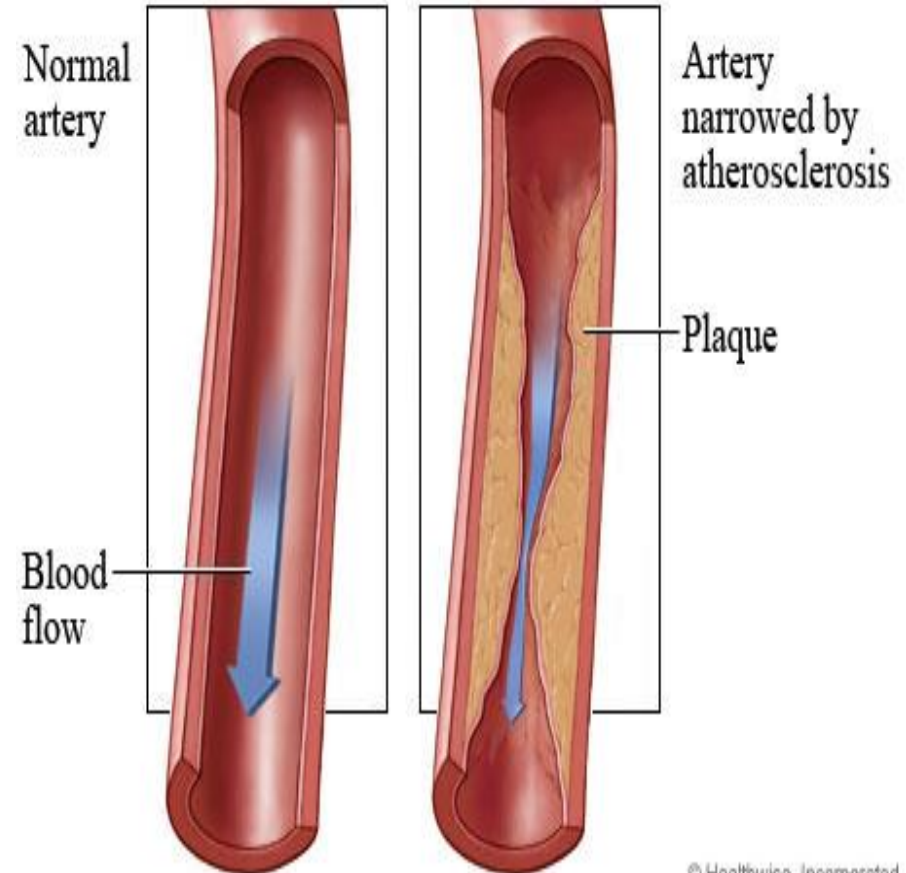
## Sugar, High Fructose Corn Syrup





# Inflammation, Not Cholesterol is Cause of Heart Disease (NEJM)

- Cholesterol that build up on artery walls is oxidized, which damages the cholesterol cells.
- Your immune system may mistake the oxidized Cholesterol for bacteria. This causes your immune system to fight it off, which can lead to inflammation in vessels.
- This clean up process forms plaque to protect you from harm. Over time this plaque can rupture and form a blood clot which completely obstructs blood flow and heart attack will occur.
- Guidelines in 2015 – Restrict Cholesterol to 300 mg a day. Last guideline in 2015, cholesterol does not cause heart disease and no restriction on cholesterol



# Other Food That Increase Inflammation

- Refined carbs, starchy carbs spike insulin level and lay down visceral fat
- Refined flour and breads will spike insulin levels
- Grains can be contaminated with Gluten which creates inflammation.
- Breakfast cereals can spike insulin (Cheerios, 9 grams of sugar, 22 carbs per serving)
- Dairy can cause inflammation by casein and lactose intolerance
- Fruit juices



# Foods That Cause Inflammation

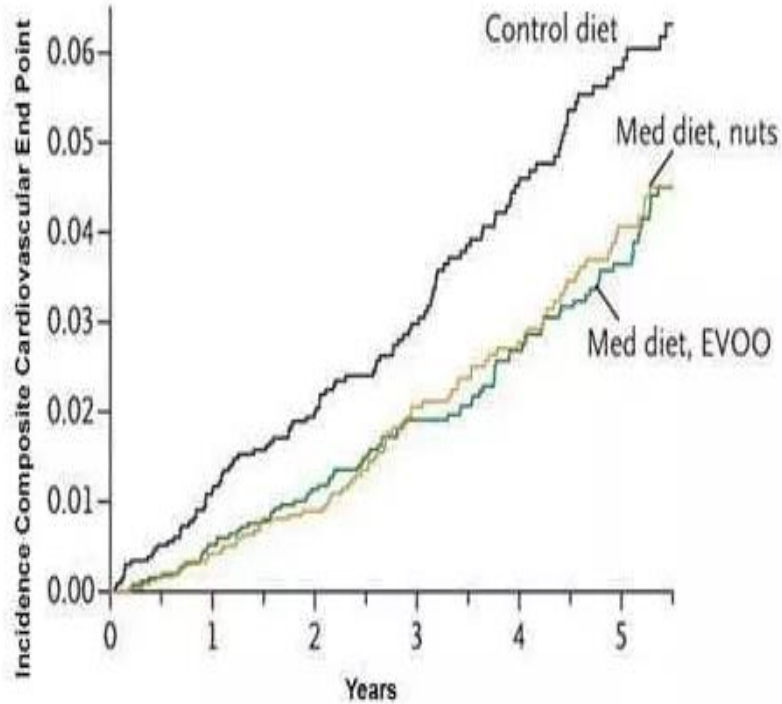
- Sugar, HFCS
- Refined grains – breakfast cereals, white bread, pasta, white rice.
- Bad Fats – refined vegetable oils, shortening, hydrogenated fats, fried foods
- Corn feed meat and poultry
- Farmed fish
- Processed foods like potato chips, crackers, frozen meals, processed meat and instant noodles
- White flour products
- MSG
- Casein in dairy products
- Aspartame, neurological
- Alcohol – Can increase insulin

# Best Anti-Inflammatory Diet – Mediterranean ( High Fat Diet)

- High fat diet with increased intake of saturated fat (Olive oil and nuts)
- Lot of fruits and vegetables
- Meats ( fish, chicken, turkey and eggs. Red meat rarely)
- American diet (SAD) is low fat diet with low intake of saturated fat
- SAD use more breads, pasta, rice and potatoes than Mediterranean diet.
- Consumption of fruits and vegetables is less than Mediterranean diet
- Nuts and Olive oil are not eaten frequently in the SAD diet

# Heart Attack, Stroke, Death – Reduced by 30%

## Predimed Study



Study stopped early due to deaths with American diet.





# Best Carbs – Low Glycemic - Green Leafy Vegetables and Fibrous Carbs – Do Not Spike Insulin and are non- inflammatory

## **Green Leafy Vegetable**

- Kale, Spinach, Turnip Greens, Collard Greens, Arugula, Cabbage, Beet Greens, Watercress, Romaine Lettuce, Swiss Chard, Bok Choy,
- They are packed with vitamins, minerals, fiber and antioxidants and are low in calories
- Eat as much as you want

## **Fibrous Vegetables**

- Bell Peppers, Broccoli, Asparagus, Mushrooms, Zucchini, Cauliflower, Green Beans, Cucumbers, Brussels Sprouts, Celery, Tomatoes, Onions, Eggplant

# Starchy Carbs – Eat in Moderation

## Higher Insulin Response

### Starchy Vegetables

- Beans (kidney, navy, pinto, black, cannellini)
- Butternut squash
- Chickpeas
- Corn
- Lentils
- Parsnips
- Peas
- Potatoes
- Sweet potatoes
- Taro
- Yams

- Starchy Carbs pack 3-4 times more carbs per serving.
- Diabetics have to limit their intake of starchy carbs.
- Most of starchy vegetable are low to moderate GI except for potatoes.

# Dr. Terry Wahls – Reversing MS

## Increased Intake of Leafy Greens

### Smoothie Recipe

- 3 cups of kale or spinach
- 1 cup of almond milk
- 1 tablespoon lime or lemon juice
- ½ cup frozen mixed berries
- 1 stick of Stevia
- 2 tablespoons ground flax seeds
- 1 tablespoon of MCT oil

In Wheelchair in 2007 and with new diet a complete recovery



# Take Action – Get a Oil Change – Swap Vegetable Oils for Good Fats

## **Avoid Refined Vegetable Oils**

- Soybean oil, Corn oil, Safflower oil, Canola oil and Peanut oil
- Refined cooking oils are made by intensive mechanical and chemical processes that extract the oil from the seeds. The refining process also utilizes chemical solvents and high temperatures.
- This process removes the natural vitamins and minerals from the seeds and creates a product that has been shown to become rancid and oxidize easily, causing free radical formation

## **Use Good Fats**

- Extra Virgin Olive Oil
- Extra Virgin Coconut Oil
- MCT Oil
- Butter – Grass Fed Cows
- Avocados
- Nuts
- Seeds
- The Above Fats are anti-inflammatory and are antioxidants

# Protein

## Protein

- Fatty oily fish that contain Omega-3 fatty acids which are anti-inflammatory (Salmon, Herring, Anchovies, Sardines and Trout).
- Seafood such as lobster, shrimp, scallops
- Eggs – Free Range

## Protein

- Organic Chicken
- Grass –feed beef and lamb
- Wild deer, turkey, elk and buffalo
- Steaks should be once a week and the size of the palm of your hand.
- Processed meats (hotdogs, bacon, bologna and luncheon meats) have small risk of cancer of 0.6% (absolute risk)



# Keto Diet With All Protein

- If you consume too much protein then this can be converted into glucose by a process called 'gluconeogenesis'.
- Eat a lot of leafy green vegetables with protein.



# Why Does Most Exercises Fail to Lose Weight or Remove Visceral Obesity?

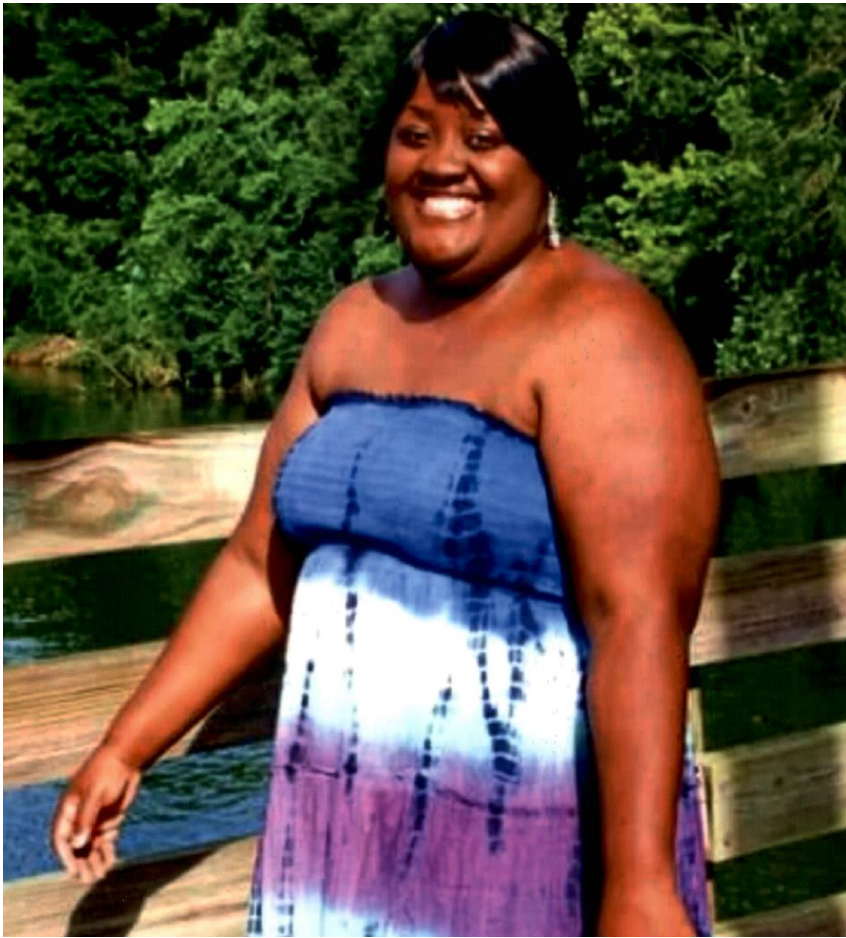
## **Sprint 8**

- Most do not activate fat burning hormones ( Growth Hormone and Testosterone).
- Sprint 8 resulted in 27% reduction in body fat and naturally increased GH,Test.
- Sprint 8 Lowered insulin resistance better than Metformin

## **Sprint 8**

- Sprint 8 burns 25-30% more calories than low intensity exercise.
- Sprint 8 has a afterburn effect and will burn calories even after you complete the exercise

# High Intensity Exercise Can be Rewarding



# Summary

- Obtain a fasting insulin level. If your level is  $> 5$ , you have carbohydrate intolerance and need a high fat-low carb diet like the Mediterranean diet.
- You must avoid sugar, refined carbs, fruit juices, refined cereals, dairy if lactose intolerant, and artificial sweeteners.
- Small quantities of starchy carbs like beans and potatoes
- Small quantities of mixed berries (1/2 cup)
- Unlimited amounts of green leafy vegetable and fibrous vegetables
- Grass-fed butter and occasional yogurt with no added sugar
- Small quantities of gluten-free grains (brown rice, quinoa)
- Plenty of good fats ( extra virgin coconut oil, extra virgin olive oil, MCT oil and avocados)
- Moderate amount of nuts and seeds (almonds, walnuts, pecan, macadamia nuts, pumpkin seed, sesame seeds and chia seeds)
- Seafood low in mercury (Anchovies, Herring, Mackerel, Sardines, Squid (calamari), Tilapia, Trout (freshwater), Wild salmon (canned) and fresh.
- Shellfish including clams, oysters, mussels, shrimp, scallops, and crab.
- Grass-fed beef, bison, lamb and organic poultry.
- Organic eggs
- Organic turkey and sausage
- Red Meat – (4-6 ounces) once a week
- Rarely processed meats (hot dog, canned meats, salami, bacon, sausage)
- Minimal gluten in form of whole grains (steel cut oats), whole kernel rye bread)
- Occasional treats of real sugar, maple syrup and honey