

Cholesterol, Saturated Fat, Salt, Gluten and More...Are They The Enemies we Make Them Out to be?

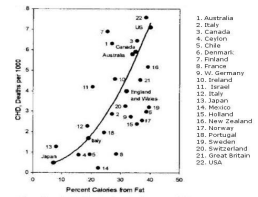
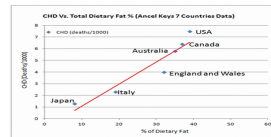
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World Fitness Expo 2018

Cholesterol myths: why?

Today's Objectives

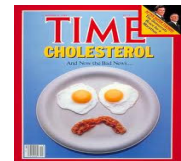
Cholesterol & Saturated fat: The history

• 7 Nation Study



Cholesterol: the Myths

History in The Making



Cholesterol: why we need it!

- Waxy substance that is an important part of cell membranes
- Produces cell membranes (cell cannot be made w/o)
- Makes hormones
- Vitamin D
- Bile acids (digestion)
- Formation of memories
- Neurological function
- Immune system

Cholesterol: Blood Level Impact on CD



Science Has Come a Long Way

Cholesterol: Food Impact on Levels



Food for Thought

Statins: Danger Ahead!

- Side effects include:
 - ✓ Polyneuropathy
 - ✓ Dizziness
 - ✓ Cognitive impairment
 - ✓ Increase risk of cancer
 - ✓ Decreased function of immune system
 - ✓ Depression
 - ✓ Liver problems
 - ✓ Depletion of Coenzyme Q-10



Saturated fat: misconceptions

Saturated Fats...Why We Need Them

Are we really sure?

- Heart disease causes about 40% of all deaths
- From 1910-1970: proportion of animal fats in diet 83%-62%
- Butter dropped from 18 lbs/yr/person to 4
- In the past 80 years dietary cholesterol has increased by 1%
- Increase in vegetable oils (margarine, refined oils) = 400%
- Increase in sugar/processed foods = 60%

5 Factors

Nurses Study- 82% coronary events attributed

1. Don't smoke
2. Drink alcohol in moderation
3. Engage in moderate to vigorous exercise for at least half an hour per day on average
4. Maintain a healthy weight (BMI under 25)
5. Eat a wholesome, low-glycemic diet with plenty of omega-3 and fiber

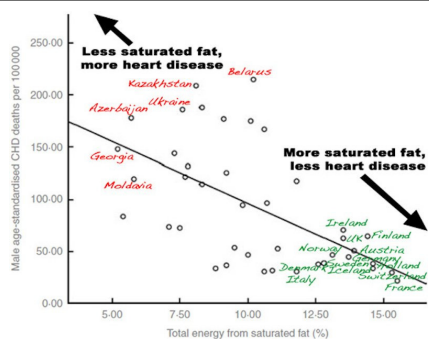
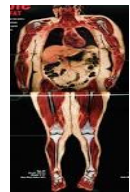


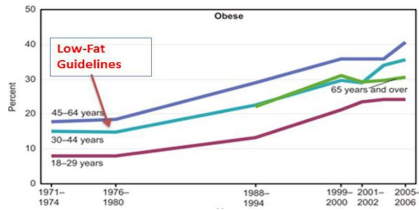
Fig. 1. Saturated fat intake and CHD mortality in Europe (1998). R^2 linear = 0.339.

All fats are not created equal

- Trans
- Saturated fats
- Monounsaturated fats
- Polyunsaturated fats
 - Omega-3
 - Omega-6



Rise in obesity in 1971-on



Gluten is just In bread, right?

- Seasoning/spices
- sausage
- Condiments
- “natural flavouring”
- Store bought salad dressings
- Baking powder
- beer
- Deli meat
- Any flavourings
- Soy sauce (made by fermenting wheat)
- Cheese products
- Soups/broth
- Brown rice syrup (barley)
- What about your meat?

Gluten is the Devil?

The Evolution of Wheat

- The variety of wheat we eat today is vastly different than the Einkorn or Emmer eaten thousands of years ago
- Most pronounced changes have occurred in the last 50 years: Triticum aestivum (durum) and (compactum)
- New dwarf varieties account for 99% of all wheat
- Helped relieve world need but never tested
- 14 new gluten proteins were found in a hybrid

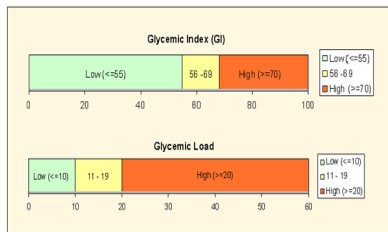
Prevalence of Intolerance

- Celiac disease (as diagnosed through blood tests): 1 in 133
- In people with symptoms: 1 in 56
- In people with 1st degree relatives: 1 in 22
- Average diagnosis time: 4 years
- If diagnosed over age 20: 34% chance of developing auto-immune disorder (vs. 3.5%)

Substitutes for gluten

- Rice flour
- Tapioca starch
- Potato starch
- Potato Flour
- Sorghum Flour
- Almond Flour
- Buckwheat
- Coconut flour
- Bean Flour
- Chickpea

Glycemic Index versus Load



Comparison

- Thiamin: Tuna 37%
Sunflower seeds 35%
Beans 25%
- Riboflavin: Liver 270%
Almonds 60%
Fatty Fish 29%
- Niacin: Chicken 77%
Tuna 67%
Asparagus 7%
- Pyridoxine: Pistachios 85%
Garlic (100g) 62%
Sun seeds 95%
- Folate: Liver 173%
sun seeds 60%
Leafy greens 25-75%
Asparagus 37%

www.glycemicindex.com

Wheat Bread: GI 74 GL 10 (15g carb 30g ss)
 White Bread: GI 75 GL 10
 Quinoa: GI 53 GL 13 (25g carb 150g ss)
 Couscous: GI 60 GL 21 (35g carb 150g ss)
 Carrots: GI 47 GL 3 (5g carb 80g ss)
 Baked Potato GI 69 GL 19 (27g carb 150g ss)

Comparison

- Manganese: Cloves 70%/tsp!
Hazelnut 177%/oz.
Pine nut 123%/oz.
cocoa 165%/cup
- Selenium: Brazil Nut= 137%
per nut!
- Iron: Cocoa 10%/tsp
Liver 100%
Sesame seeds 23%/oz.
- Fiber: Raspberries 6.5g/cup
Avocado 12g
Apple 5g
Almonds 4g/oz.

Why bread and grains?

- 2 slices whole wheat bread
 - 170 kcal
 - 8g protein (x complete)
 - 4g sugar
 - 4g fiber
 - Selenium 30% DV
 - Manganese 30% DV
- Thiamin (B1) 14%
- Riboflavin (B2) 8%
- Niacin (B3) 14%
- Pyridoxine (B6) 6%
- Folate (B9) 6%
- Iron 8%

Conclusion

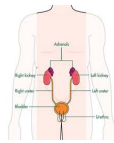
Salt is bad because...



Salt: History and facts

Salt: necessary for our bodies

- Salt concentration in body must be kept constant
- Necessary for adrenal function
- Support enzyme function
- Energy production, hormone production
- Protein transport
- Body's acid base balance



But what about BP and cd?

Too little salt?

Effect of reduced blood pressure

- Meta-analysis (167 studies included)
- Treatment under 1.5 tsp (3500mg sodium)/day
- Hypertensive subjects = mean 5.5 mm Hg systolic/ 2.8 mm Hg diastolic
- Non-hypertensive: 1.3 mm Hg/ 0.1 mm Hg ↓
- Treatment resulted in: ↑ Renin, Aldosterone, Lipids (cholesterol, triglycerides)
- Renin begins to rise at salt consumption levels under 3910 mg

INTERsalt study

Salt: things to consider

Other repercussions

Is all salt created equal?

- 'Table salt' = refined: recrystallization removes magnesium and trace minerals. Anti-caking agents added during the drying process. These agents are cause for concern
 - Ferrocynaide and aluminosilicate
- Iodization began in the 1920s. It eliminated goiters but potentially increased autoimmune thyroiditis (sensitive individuals)

Potassium and water balance

Dietary guidelines have become far more a reflection of activist ideology than sound science.

Salt institute via Morton Satin