



# **BUSTING THE PROTEIN MYTHS – MEAT PROTEIN**

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# WHY PROTEIN??



- Body structure – Amino Acids
- Anabolic – Growth
- Repair
- Muscle synthesis
- Control Body Function
- Transport and metabolism
- Energy

# IMPORTANCE FOR ENDURANCE ATHLETES



- Recovery
- Repair
- Rebuild

# WHAT I NEED FOR MYSELF? FOR MY KIDS??



- First class food
- First class shelter
- First class education/ career

First class

Top class

A level



# MYTHS ABOUT MEAT PROTEIN

# MYTHS/FACTS ON MEATS



- Meat rots in the colon
- Meat is harmful and high in saturated fats and cholesterol
- Meat causes heart disease and type 2 diabetic
- Red meat causes cancer
- Humans are naturally herbivorous and not designed for meats
- Meat is bad for your bones
- Meat makes you fat

# Myth: Meat protein causes CVD's



Cohort – USA 2009-2012

Included in the analysis were 4,48,568 men and women without prevalent cancer, stroke, or myocardial infarction, and with complete information on diet, smoking, physical activity and body mass index, who were between 35 and 69 years old at baseline.

26,344 deaths were observed

**All processed meat but not red meat and poultry are related to cardiovascular diseases and cancer with high mortality rates.** [Rohrmann et al, 2013. BMC Medicine]

# Meat and hypertension – The Truth



## ***•Does Red Meat Metabolism Induce Hypertension?***

**•Trimethylamine-N-oxide (TMAO), a compound produced mainly from the metabolism of red meat by intestinal microbiota, has been recently linked to cardiovascular disease.**

**•Careful review of current literature and recent findings suggests that TMAO could be the hypertensive component of red meat. This review provides a novel insight into the mechanism by which TMAO may induce hypertension. (Gonzalez, Liu, Machado, Chen ; 2015)**



# Myth: Animal Proteins Cause Cancer



## STUDY 1:

- **A recent meta-analysis found no association between animal protein intake and colorectal cancer.** (Alexander 2009)
- One study found that overall cancer incidence was lower among vegetarians; however, **more colorectal cancer was reported among the vegetarians compared to meat eaters.** (Key 2009)

# Myth: Animal Proteins Cause Cancer



## STUDY 2:

### Prospective Cohort since 1986- 1994

- High incidence of colon cancer in affluent societies is attributed to high fat diet and more in particular, the consumption of meat.
- **Processed meat were associated with the risk of colon cancer not fresh meat, beef, pork, minced meat chicken and fish** (Goldbohm et al, 1994. American Association for Cancer Research)

# Myth: Animal Proteins Cause Cancer



## STUDY 3:

**Association between unprocessed red and processed meat, poultry, seafood, egg intake and risk of prostate cancer : a pooled analysis of cohort- 2015**

- 52,683 Ca prostate cases including 4924 advance cases among 8,42,149 men.
- North America and other continent
- **Processed meat = Positive effect**
- **Fish = Reverse effect**
- **Poultry meat = No effect**
- **Egg = No effect**

# Myth: Animal Proteins Cause Cancer



## **STUDY 4: Diet and colorectal cancer (Baena, Salinas; 2015)**

- Obesity increases the risk of CRC by 19%.
- Regular physical activity reduces this risk by 24%.
- CRC risk derived from red meat intake is influenced by both total intake and its frequency.
- **Fish consumption may decrease CRC risk by 12%** whereas garlic intake is not significantly associated with reduced CRC risk
- Intakes of more than 20 g/day of fiber are associated with a 25% reduction of CRC rise.

# Myth: Animal Proteins Cause Cancer



## STUDY 5:

- A Review and meta analysis of prospective studies of red and processed meat, meat cooking methods, heme iron and heterocyclic amines and CA Prostate
- Nutr J. 2015; 14: 125. Published online 2015 Dec 21.
- Red and processed meat have been long debated as potential risk for CA prostate..
- **Researchers observed null results associated between processed meat and prostate CA**

# Myth: Animal Proteins Cause Cancer



## STUDY 6:

- Dietary food groups intake and **cooking methods** associations with pancreatic cancer: A case–control study 2015
- Our results indicate that **increased frequency of intake of bread, rice, and red meat (especially barbecued) and deep fried vegetables can aggregate PC risk, while increased frequency of fish consumption can protect against PC.** (Bylsma, Alexander; 2015. Nutrition Journal)

# B12, FOLATE & MEAT PROTEINS



Vegans have lower vitamin B12 concentrations, but higher folate concentrations, than vegetarians and omnivores. **Half of the vegans were categorized as vitamin B12 deficient and would be expected to have a higher risk of developing clinical symptoms related to vitamin B12 deficiency.** (Crowe et al, 2010. Eur J Clin Nut)

# ANIMAL PROTEINS & EXERCISE



- Protein quality also appears to be important in maximizing the accretion of muscle proteins, so athletes would do well to focus on **high quality protein sources such as dairy protein, eggs, and lean meat. The high quality protein dose that appears to maximally stimulate muscle protein synthesis is close to 20–25 g**, above which protein synthesis is not additionally stimulated. [Philips, 2012. Br J Nut]
- **Extra protein for endurance athletes is required since endurance exercise increases ‘amino acid’ oxidation; especially that of leucine.** An increased leucine oxidation during endurance exercise may mean an increased need for dietary leucine . [Philips, 2012. Br J Nut]



# PROTEINS & CALCIUM



- Acid diet (high-meat protein) Effects on calcium metabolism and bone health  
Jay J. Cao and Forrest H. Nielsen
- Current Opinion in Clinical Nutrition and Metabolic Care 2010
- On the basis of recent findings, consuming protein (including that from meat) higher than current Recommended Dietary Allowance for protein is beneficial to calcium
- Utilization and bone health, especially in the elderly. A high-protein diet with adequate calcium and fruits and vegetables is **important for bone health and osteoporosis prevention.**

# WE ARE CARNIVORES



- Since More than 2 millions years we have been primarily meat eaters
- Only since last 10,000 years we have shifted to cultivating grains and legumes
- Our genes were developed before the agricultural revolution
- The human genome has not changed. Only less than 0.02% in last 40,000 years.

# BENEFITS



- Complete protein
- Vitamin B12
- Vitamin D3
- Carnosine (anti aging and anti-glycating agent)
- Creatine
- Omega 3 fatty acid
- Heme iron
- Sulphar containing AA

# TAKE HOME MESSAGE



- IT IS NOT ONLY ABOUT THE MEATS...
- But we need a major lifestyle transformation
- Whites – Maida, Sugar, Salt and Polished rice
- Processed , easy fix, quick 2 minute food need to be avoided
- Lack of awareness about natural, farm fresh, pesticide free things
- Nuclear families, lack of help, lack of knowledge, lack of wisdom
- All are contributing factors to lifestyle diseases.

# THANK YOU!!!



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