



# Omega 3 EFA and Your Health

Research Results Unknown  
to the American Public

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## Omega 3 EFA and Your Health

Information gathered from

# THE OMEGA DIET

by  
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## Health and Nutrition Quiz - 1

- List the largest nutritional factor linked to heart disease in the Western world
- List one bad fat
- List one good fat

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## Health and Nutrition Quiz - 2

- What is the largest human health problem in the United States?
- What is your largest nutrition concern when feeding your family?

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## Did You Know?

- What is the largest health problem facing people in the Western world as of 2004?

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## Now You Know

- “Omega-3 deficiency is the largest health problem facing the Western world”
  - Statement by the International Association of Lipid Chemists - Meeting in England 2004

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## Omega-3 EFA Deficiency

- larger than OBESITY
- larger than AIDS
- larger than CARDIOVASCULAR DISEASE
- larger than CANCER

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## Omega 3 Deficiency Researched Disease Links

- Heart Attack
- Stroke
- Cancer
- Obesity
- Insulin Resistance
- Diabetes
- Asthma

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## Omega 3 Deficiency Researched Disease Links

- Arthritis
- Lupus
- Depression
- Schizophrenia
- Attention Deficit Hyperactivity Disorder
- Postpartum Depression
- Alzheimer's Disease

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## Did You Know ?



## Fat Terminology

- Old News, Inaccurate News
  - Saturated is bad
  - Unsaturated is good
- NEW NEWS
  - Polyunsaturated fats have VERY DIFFERENT effects on your health

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## Polyunsaturated Fat Terminology

- Omega-3 EFA (*alpha-linolenic acid*)
  - first double bond between 3rd and 4th carbons
  - also called n-3 EFA
- Omega-6 EFA (*linoleic acid*)
  - first double bond between 6th and 7th carbons
  - also called n-6 EFA

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## Omega-3 EFA and Heart Health



## Lyon Diet Heart Study : 1994

- CONTROL Diet: 302 French heart attack survivors assigned to a control diet – (id of this diet later...)
- EXPERIMENTAL Diet: 302 other French survivors assigned to a modified Crete diet (high Omega-3 EFA)

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## Lyon Diet Heart Study : 1994

- Experimental Diet : High Omega 3 Diet
  - based on canola oil and olive oil
  - omega-6 to omega-3 ratio = 4:1
  - 35% total fat in diet
  - lower in deli meats and red meat
  - higher in fish, grains, fruits, vegetables

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## Lyon Diet Heart Study RESULTS

- 4 months after start of trial
  - already difference in survival rates!
  - never has another study shown benefit before 6 months

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## Lyon Diet Heart Study RESULTS

- survival gap widened each and every month thereafter!
  - after two years, study halted due to ethical considerations for those on the AHA diet

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## Lyon Diet Heart Study Your Prediction.....

- What level of heart attack reduction would really get your attention ? ? ?
- Your prediction for this trial ? ? ?

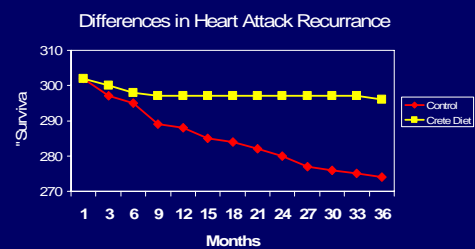
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## Your Prediction ?



## Lyon Diet Heart Study RESULTS



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## Lyon Diet Heart Study RESULTS

- Crete diet patients had 60 % less chance of suffering second heart attack than the Control diet patients!

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## Lyon Diet Heart Study RESULTS

- Crete diet patients showed an *unprecedented 76 % lower* risk of dying from cardiovascular disease than the Control diet patients !!!

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## Lyon Diet Heart Study RESULTS

- Better results than ANY OTHER researched diet, drug, lifestyle, or any combination of any of these factors.....!

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## Lyon Diet Heart Study

- CONTROL Diet identification ?

? ? ? ?

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## Lyon Diet Heart Study

- CONTROL Diet identification ?

American Heart Association's  
Prudent Heart Diet !!!

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## Lyon Diet Heart Study Published in *THREE* Peer-Reviewed Professional Medical Journals

- The Lancet, 1994. Vol 343:1454-1458.
- American Journal of Clinical Nutrition, 1995. Vol 61(suppl):1360s-1367s.
- Journal of the American College of Cardiology, 1996. Vol 28(5):2203-2208.

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### My Lyon Diet Heart Study Conclusions

- Cholesterol and Saturated Fat intake mean NOTHING compared to Omega-3 and Omega-6 EFA dietary intake
- We have the knowledge to start reaping the benefits of higher Omega-3 intakes .....TODAY !!

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Did You Know ?



### Omega-6 to Omega-3 Ratio

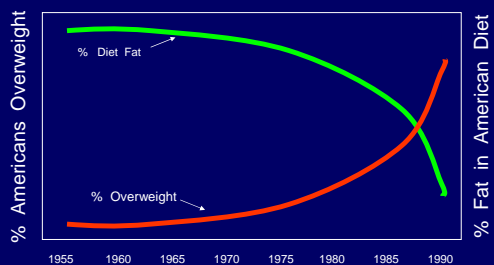
- Typical American diet has EFA ratio of 14 :1 to 20:1
- Research Results suggest ratio of EFAs for optimum health is 4:1 to 6:1

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### We Americans Get Fatter : on Less Fat in Diet

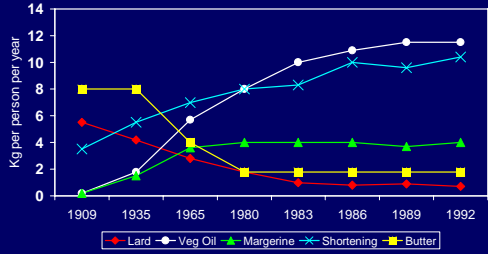


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## Changes in U.S. Fat Consumption 1909 - 1992



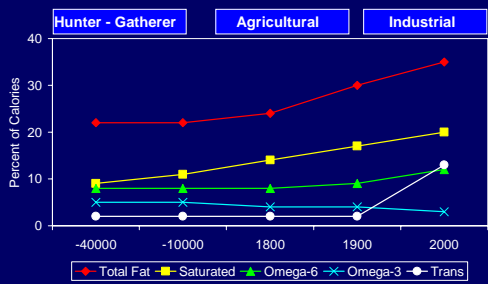
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## Our Diet Has Changed



## Changes in Fat Consumption Throughout Human Evolution



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Early Human Diet vs Our Modern Diet

## Original Human Diet Compared

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Paleolithic Diet                     <ul style="list-style-type: none"> <li>- more meat</li> <li>- more fish</li> <li>- more greens</li> <li>- more fruit</li> <li>- less grains</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Modern Diet                     <ul style="list-style-type: none"> <li>- less meat</li> <li>- less fish</li> <li>- less greens</li> <li>- less fruit</li> <li>- more grains</li> </ul> </li> </ul> |
|--|---|

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## Original Human Diet Compared

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Paleolithic Diet                     <ul style="list-style-type: none"> <li>- more Omega-3 EFA</li> <li>- less Omega-6 EFA</li> <li>- &lt;2% trans fats</li> <li>- Omega-6 to Omega-3 ratio = 1:1</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Modern Diet                     <ul style="list-style-type: none"> <li>- less Omega-3 EFA</li> <li>- more Omega-6 EFA</li> <li>- more trans fats</li> <li>- Omega-6 to Omega-3 ratio = 14-20:1</li> </ul> </li> </ul> |
|---|--|

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### From Original Diet to Modern Diet

- Agricultural revolution
  - we eat more grains (Omega-6)
  - we eat more animals fed grains (Omega-6)
- Industrial revolution
  - we eat more Omega-6 vegetable oils

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### From Original Diet to Modern Diet

- Lower cholesterol campaign
  - we eat more Omega-6 oils
  - we eat more trans fats
- Fear of Fat campaign
  - we eat less fat
  - promoting even less Omega-3 in diet

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### Eat Grass Fed Milk, Meat, Eggs

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### We are what we eat Animals are what they eat

```

    graph LR
      A[Diet High in Omega-3] --> B[Cow]
      B --> C[Meat, Milk High in Omega-3]
      D[Diet High in Omega-3] --> E[Family]
      E --> F[Healthy Life]
  
```

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We are what we eat  
Animals are what they eat

- Omega-6 to Omega-3 ratio
  - typical eggs - 20:1
  - free range eggs - 1:1
  - typical milk - 15:1
  - special flax diet milk - 3:1
  - pasture only milk - 1:1



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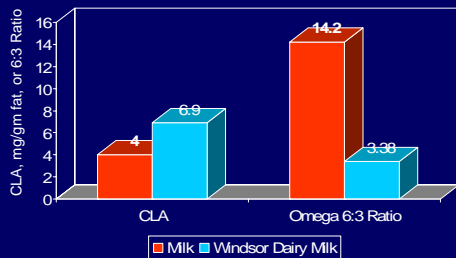
We are what we eat  
Animals are what they eat

- Omega-6 to Omega-3 ratio
  - typical beef - 20:1
  - pasture fed - 5:1
  - wild game - 3:1

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Windsor Dairy Winter Milk  
vs Typical Milk  
CLA and Omega 6:3 Ratio



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Any Questions ?

