

The Basics

- Fat is a vital energy source
- Essential fats vs. non essential
- The “right” fats fight inflammation, can help with recovery and improve health



GOOD FATS

VS.

BAD FATS



Functions of Fat

- Provide fat soluble vitamins (A, D, E, & K)
- Brain function
- Contribute to growth and development
- Anabolic properties?
- Protection from concussions?

Omega-3s at Every Stage of Life



Moms

- Fetal growth
- Maternal stores



Babies 5–35 lbs

- Brain growth
- Visual development



Kids 3+

- Brain growth



Adults

- Cellular stress regulation
- Cardiovascular protection



Seniors

- Neurological cell preservation
- Cellular stress regulation
- Cellular health

Consensus Statement

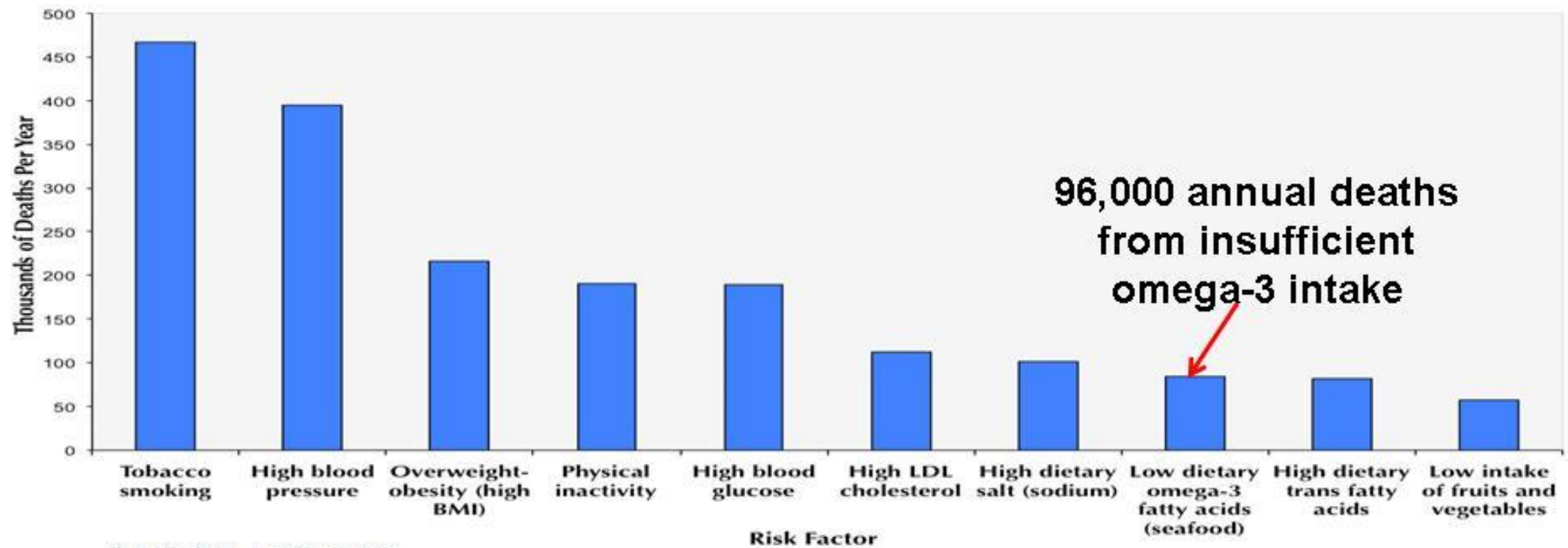


“Brain and heart disorders resulting from LC-Omega-3 (EPA+DHA) deficiency are the biggest challenges to the future of humanity.”



Consensus statement from the 2012 Global Summit on Nutrition, Health and Human Behavior

Preventable Causes of Death (Harvard University)



Ref. PLoS Med., 6(4), (2009).

Essential Omega-3

Marine-based Omega-3: EPA and DHA

- Found primarily in oily cold-water fish such as herring, tuna, sardines, anchovies, salmon, and cod

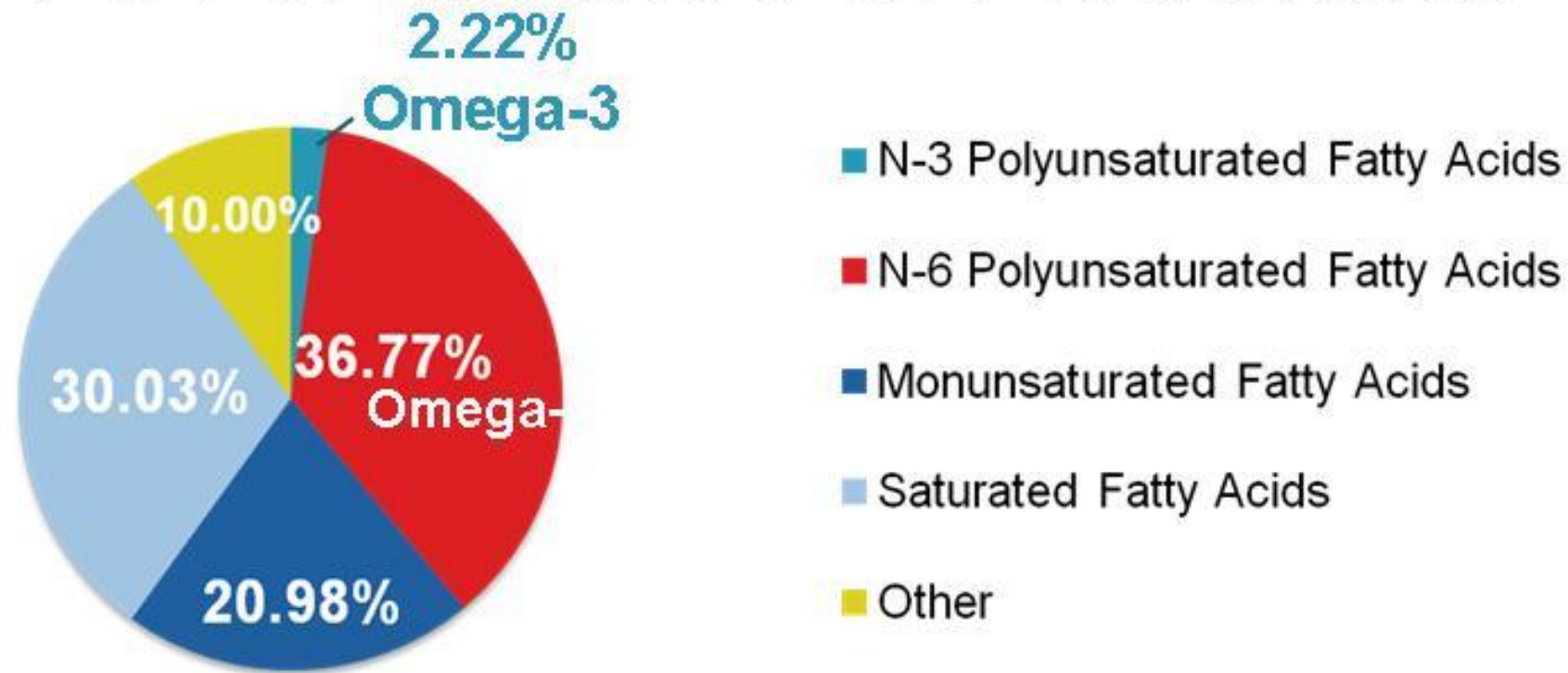


Plant-based Omega-3: ALA (Alpha Linolenic Acid)

- Found primarily in flaxseed oils, certain vegetable oils, and some green leafy vegetables
- Not a reliable source of EPA and DHA for humans, most people convert only about 1–5%



EFA Balance is Essential



National Center for Environmental Health
Division of Laboratory Sciences

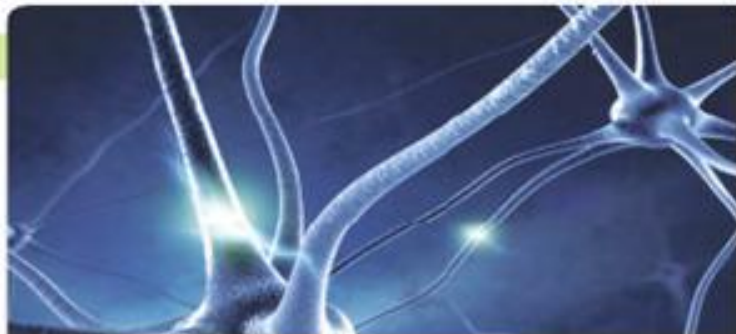


2012 2nd National Report on Biochemical Indicators of Diet and Nutrition in the US Population

Omega-3 long-chain fatty acids and their use in traumatic brain injury and concussions

Michael Lewis

Traumatic brain injury (TBI) is a major cause of death and disability worldwide, especially in children and young adults. Of the 44 million youths in the United States who play organized sports, at least a half million are estimated to suffer a sports-related head injury each year, while the Centers for Disease Control



We don't yet have a randomized, placebo-controlled, clinical trial of omega-3s for either severe TBI or concussions. But we do know that omega-3s are the nutritional foundation of the brain and the neuronal cell wall...

And we know from growing amounts of clinical experience, that omega-3s can be immensely useful to decrease or eliminate many of the symptoms that plague patients following brain injury.

Fat to Choose

- Olive oil
- Canola oil
- Avocado
- Nuts
- Nut Butters
- Egg yolks
- Fish and fish oil

NOTE: This is not a comprehensive list



1 "Handful"
Carbohydrate

Brown rice
Sweet potato
Whole grain tortilla
Whole grain bread
Beans

1 "Handful"
Protein

Fish Beef
Pork Chicken
2 Eggs Turkey

Fruits/Veggies

Apples
Bananas
Oranges
Berries
Spinach
Collards
Kale

Summary

- Quality sources include nuts, seeds, peanut butter, dairy, fish, egg yolks and visible fat on meats
- Fat intake should be 20 to 35% of total calorie intake
- Intake should be focused on omega-3 fats and monounsaturated fats