The Epidemic of the 21st Century in America

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Remembering an Epidemic from the Past

The following are symptoms of a disease that caused illness in epidemic proportions:
- Nausea
- Tiredness
- Muscle and joint pain
- Easy bruising
- Swollen and bleeding gums
- Loosening of teeth
- Wounds healing slowly and poorly
- Old fractures separating
- Dry skin and hair
- Bleeding into muscle and joints, causing pain
- Irritability & Anxiety
- Sleep disorder

What is this Disease?

The answer: Scurvy

Scurvy was found to be a severe lack of Vitamin C in the diet

A Nutritional Deficiency Disease

Remembering an Epidemic From Recent Times

The following are results of another disease that caused defects in epidemic proportions:
- Spina Bifida
- Anencephaly
- Other Neural Tube Defects

What is this Disease?

The answer: Folic Acid Deficiency

Folic Acid Deficiency is a severe lack of B-9 Vitamin in a woman's diet

A Nutritional Deficiency Disease
Symptoms of a 21st Century Epidemic

The following are symptoms of a disease currently causing illness in epidemic proportions:

- Arthritis/Fibromyalgia
- Adult & Childhood ADD/ADHD
- Alzheimer’s Disease
- Cognitive Decline
- Asthma & Allergies
- Anxiety, Depression, & Bipolar
- Cancer
- Decreased Visual Function

What is this Disease?

The answer:

Omeganemia™

Lack of Omega-3 Essential Fatty Acids (EFAs)

A Nutritional Deficiency Disease

Ockham’s Razor

“All things being equal, the simplest solution is most frequently the correct solution.”

Hanlon’s Razor

“Never attribute to malice that which can be adequately explained by stupidity”

What do all these diseases have in common?

Lack of an essential nutrient in the diet results in a nutritional deficiency disease/disorder and concomitant medical conditions and problems:

- Scurvy caused by lack of Vitamin C
- Neural Tube Defects caused by lack of Folic Acid
- Omeganemia caused by lack of Omega-3 EFAs

Essential Nutrients cannot be made or stored: must be consumed

The Changes in the American Diet

Past (19th Century)
- 50 Million Farmers/100 Million People
- Many small farms producing locally
- Short-shelf life
- Omega-3s In

Present (20th Century)
- Agribusiness - 3 Million Farmers/300 Million People
- Many large farms producing globally
- Long shelf life
- Omega-3s Out/Omega-6s In

Future (21st Century)
- Add-Back Hoax
- ALA/Insufficient quantities

Omeganemia™;
The Scurvy of the 21st Century

The “Inconvenient Truth” of American Medicine today
Typical American Diet Today
Severe Omega Imbalance

- A healthy diet consists of 1:1 ratio of Omega-3s to Omega-6s
- The average American Diet is 1:25, as high as, 1:50
- This occurred when healthy unsaturated fats were replaced with trans fatty acids and diets full of processed foods (high in Omega-6)

All Omegas (Polyunsaturated Fatty Acids -PUFAs) Are NOT Created Equal

- Omega-6s
  - Pro-Inflammatory
  - Vegetable Oils
  - Saturated Fats
  - Processed Foods
  - Animal Fat
  - Corn Fed Cattle
  - High fructose corn syrup

- Omega-3s
  - Anti-Inflammatory
  - Polyunsaturated Fats
  - Plants
  - Fish

All Omega-3 Essential Fatty Acids (EFAs) Are NOT Created Equal

- ALA (alpha-linolenic acid) - found in green leafy vegetables, flaxseed, soybeans, canola oil and walnuts (parent Omega-3)
- DHA (docosahexaenoic acid)
  - Brain Food
- EPA (eicosapentaenoic acid)
  - Anti-Inflammatory

Unfortunately, ALA converts poorly (<1%) to EPA & DHA which are the only two EFAs proven to have significant health benefits.

Physiological compartmental analysis of a-linolenic acid metabolism in adult humans

Journal of Lipid Research
Volume 42, 2001

Outcomes

30% Genetics

70% Choices

Type I Diabetes

Omega-3 Polyunsaturated Fatty Acid Intake and Islet Autoimmunity in Children at Increased Risk for Type I Diabetes

Source: Jama, September 26, 2007-Vol 298, No.12
Implications of Omega Imbalance

Why should we care?

The Common Link is Chronic Inflammation

"The Fire Within"

Scientists believe they may have found a common link in diseases from cancer to Alzheimer’s to heart disease. Here’s the story behind the search for the secret killer.

By David Stepp

Source: Fortune

The Common Cause is Omega Imbalance

Inflammatory Pathways (Omega-6 Mediated)

Anti-Inflammatory Pathway (EPA, DHA)
Omega-3 Depletion = Wheel of Bad Fortune ("itis")

Omega-3 Depletion: Manifestation in Children & Adolescents

Adolescent Asthma

"Low Dietary Nutrient Intakes and Respiratory Health in Adolescents"


ADD/ADHD

"Fatty acid metabolism in neurodevelopmental disorder: a new perspective on associations between attention-deficit hyperactivity disorder, dyslexia, dyspraxia and the autistic spectrum"

Source: Society of Biological Psychiatry 2207: 61-551-553

Autism

Presently in the USA

1:150 all births
1:90 male births
1:20 second sibling

Source: Society of Biological Psychiatry 2007 61:551-553
Role EFAs Play in Our Body

DHA ↔ EPA

Structure ↔ Function

Benefits of DHA

- DHA is the most abundant fatty acid in the brain and eyes (retina). DHA represents about 97% and 93% of all omega-3 fatty acids in the brain and eyes, respectively. 1-2


Benefits of DHA

- DHA is important for healthy visual and mental development of the infant in utero and throughout infancy. 1-4


Benefits of DHA

- Higher levels of DHA in breast milk were associated with an infant’s ability to easily adjust to changes in surroundings (measured using Brazelton Neonatal Behavioral Assessment scale). 31


Benefits of DHA

- A study using a statistical model of risk-benefit analysis, designed by Harvard Center for Risk Analysis estimated that increasing maternal DHA intake by 1 g/day increases child IQ by 1.3 points. 36


Benefits of EPA

- Production of neurotransmitters
- Modulation of the immune system (anti-inflammatory)
  - Asthma
  - Allergies
  - Eczema/Psoriasis
- Prevention and Treatment of Mood Disorders (i.e. anxiety, depression, & bipolar disease)
Benefits of DHA

DHA is the most abundant fatty acid in the brain and eyes (retina). DHA represents about 97% and 93% of all omega-3 fatty acids in the brain and eyes, respectively. 1


Fish Consumption

Omega-3 Repletion = Wheel of Good Fortune

Sources of Omega-3s

- Plants & Nuts - ALA
- Fish - EPA & DHA with contamination
- Dietary Supplements in the same form of the fish (Natural TG) - the only viable source

Fish Oil Production

What makes a superior dietary Omega-3 EFA dietary supplement?

- Quality & Purity: Pharmacetically Licensed
- No “fish” taste
- Bioavailability: Natural TG form
- Age, Lifestyle, and Condition Specificity
- Price
Fish Oil Absorption

TG (Natural Triglyceride Form) is 300% more absorbable than Ethyl Ester form with no toxicity

References

Potency = Concentration x Absorption

- Most Commercial Brands (Ethyl Ester)
  • 30% concentration/30% absorbability = 9% potency
- Higher Concentrated Forms (Ethyl Ester)
  • 60% concentration/30% absorbability = 18% potency
- Highest Concentrated Form: Lovaza (formerly Omacor) (Ethyl Ester)
  • 90% concentration/30% absorbability = 27% potency
- Natural TG Form
  • 60% concentration/90% absorbability = 54% potency

Ethyl ester (ethyl alcohol form of fish oil) is only sold as a prescription in Japan, Germany, Finland, Denmark, Australia, etc. because of DANGER!

Credibility

All product claims made are those substantiated by well controlled studies in peer reviewed journals

Patients are always urged to consult with their doctor

Average Life Span

Healthcare as a Percentage of Gross National Product (GNP)

Annual per capita consumption of fish

Japan is one of the highest at 152.1 pounds and USA is one of the lowest at 46.1
From Womb To Tomb

Hippocrates 400 BC

Do No Harm
Honor & Respect the Healing Power of Nature
Thy Food is Thy Remedy
Physician Heal Thy Self

Eradicating the Epidemic

It Can Be Done