Nutrition and Behavior
Crazy behavior – Could nutrition be involved?

Tuesday, September 22, 2015
Grace Lutheran Church
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Something is wrong!

A disgruntled kid joins a Bible study, then shoots them all

Police use excessive force

Drive-by shootings

Whiny children

School kids described as rude, obnoxious and ill-mannered.

Why are we concerned?

• Depression
• Violence
• Parkinson’s disease
• Dementia
• Alzheimer’s disease
• and a host of other diseases & problems
As the typical Western diet spreads, so do the problems

"Tragically, a growing body of evidence suggests that the bizarre and increasingly common behavioral problems among young children and teen-agers are related to the combined effects of high sugar intakes and the virtual absence of omega-3 essential fatty acids in the American diet."

The Modern Nutritional Diseases, and How to Prevent Them - Heart Disease, Stroke, Type-2 Diabetes, Obesity, Cancer, 2002 ed, page 199 by Alice and Fred Ottoboni, public health professionals

In contrast to modern problems, Dr. Weston Price, in his travels around the world visiting isolated primitive villages, found people who were happy and productive, but they were not eating modern processed foods!

A bit of background -
The Weston A. Price Foundation

• In the 1930’s, Dr. Price, a well-known Cleveland dentist, was concerned because his patients had so many cavities.
• He heard that there were isolated communities around the world who were known for their perfect teeth, and set out to visit them.

Dr. Price found healthy happy people

• Dr. Price found that these people also had excellent bone structure and good health
• Mothers bore their children with ease
• Children were happy and healthy
• TB, cancer and heart disease were rare
He wrote Nutrition & Physical Degeneration in 1939
These healthy people ate whole foods!

- He documented what they were eating – very nutritious local, unrefined foods, many of them raw, including raw milk and lots of cholesterol and saturated fat.
- Their diets were much higher in nutrients than the diets of his patients back home.

Western refined food brought bad teeth and poor health

- Sadly he found that in neighboring communities that had access to Western refined food, tooth decay was rampant.
- Poor health, including TB, was common.

And crooked teeth in the second generation

- And in the next generation, crooked teeth and poor bone structure were common.
- Children were sad and often ill.
- Childbirth was difficult.
- Poorer nutrition made a big difference!

Today’s Children

Those missing vitamins and minerals make a difference!

So, what does Food have to do with Behavior?

- As a probation officer, Barbara Stitt helped thousands of troubled youths to lead healthy, productive lives. How?
  - By inquiring about their diet.
  - “The connection between food and behavior is so basic that it is being overlooked by parents, the school system, counselors and most of the medical professionals. Ask any hyperactive child, depressed, angry teenager, violent adult or criminal what they eat and you’ll find they “live” on junk food, sweetened boxed cereals, candy, carbonated drinks, potato chips, fast foods. Junk food abuses the mind, under-nourishes the body and distorts the behavior.” Stitt found when diet improved, behavior, attitude, personal appearance and self esteem all improved.

The book is fascinating to read. She recommends whole natural foods, but unfortunately she doesn’t understand the importance of good fats – a victim of the Low Fat Myth.

Miracle in Wisconsin

- A revolution at Central Alternative High School in Appleton Wisc.
  - The kids now behave.
  - The hallways aren’t frantic.
  - Even the teachers are happy.
- The school used to be out of control.
  - Kids packed weapons.
  - Discipline problems swamped the principals office.
- What did they do?
  - Fast-food burgers, fries, and burritos gave way to fresh salads.
  - Meats “prepared with old-fashioned recipes”
  - Whole grain bread & fresh fruits were added to the menu.
  - Good drinking water arrived.
  - Vending machines were removed.

To learn more go to www.MercyViewMeadow.org, find ‘behavior’ on the site map.
So can nutrition really make a difference?

- Lauren Ayers fed her class of elementary children sardines and found they behaved better and learned more.
- A trial of omega-3 supplements for 117 Australian children found that their reading and spelling improved.

So let’s look at some of these essential nutrients & some deficiency symptoms.

- Omega-3 fats – DHA (violent behavior)
- Fat soluble vitamins
  - A (poor memory, apathy), D (depression, panic attacks), K (poor brain function)
- Vitamin B1 (depression, irritability, confusion, loss of memory)
- Vitamin B3 (diabetes, dermatitis, dementia, anxiety, hyperactivity, depression)

Nutrition is important, so what do we find at the grocery store?

- Lots of sugar (empty calories)
- Lots of processed vegetable oils
- Lots of additives
- Lots of white flour (stripped of nutrients)
- Plenty of pesticide residues and hormones
- Long shelf life (dead food)
- Meat from confinement raised animals (low in omega-3s)
- Margarine (lacking valuable nutrients in butterfat)

The essential polyunsaturated fatty acids

**Omega-6 fats:**
- Arachidonic acid essential – pro-inflammatory, found in animal fats
- Linoleic acid - found in vegetable oils (corn, soy, etc.), nuts
- Omega-6 and omega-3 must be in balance.
- Western diet too high in omega-6, over-powering the minimal omega-3 intake, causing many health problems
- Omega-6 oils must be limited – avoid corn, soy, canola, peanut oils
- Evening primrose, borage, sesame – healing oils
- Avoid heat-processed oils entirely (trans fats)

**Omega-3 fats, ALA, EPA, DHA:**
- Essential in cell membranes
- Essential for many body functions – anti-inflammatory
- DHA – high amounts in brain – serotonin (will power, delayed gratification)
- EPA & DHA found in wild caught seafood, pasture raised animals, esp organ meats, egg yolk
- ALA found in green plants, esp. green leafy veggies, flax and chia seeds, walnuts – poor conversion to DHA, flax oil very perishable
- Supplements – fish oils, krill oil
- Need is small – 2% of kcal at most

You get these nutrients from whole, natural foods. So, is it any surprise folks can’t think straight?
Fat-soluble Activator – Vitamin A

- There are several active forms of vitamin A
- Vitamin A needed for calcium & protein assimilation
- Critical for brain development and cognitive function
- Essential for glandular health & regulating hormones – affecting bone density in menopausal women
- Needed for healthy immune response
- Vitamin A only found in animal foods – best sources, liver, cheese, butter & egg yolk – also quality CLO
- Precursor carotenoids (dark leafy greens, carrots, sweet potatoes, etc) often not well absorbed or converted to vitamin A
- Why?
  - Low thyroid (conversion regulated by thyroxin)
  - Due to low iodine (& too much fluoride & chlorine)
  - Individual conversion variability
  - Subpar absorption
  - Gut dysbiosis
- Factors needed for conversion: bile acids, iron, niacin, riboflavin, zinc

Another “Fat-soluble Activator” – Vitamin D

- Fat soluble vitamins A, D, E, & K work together to make minerals available
- Vitamin D needed to absorb calcium from food
- Vitamin D – made from cholesterol by sunshine – moves from skin to liver to kidney to be activated
- Must be supplemented – D3
- Testing levels recommended
- Synthetic vitamin D2 may lead to too much Ca
- D & A must be in balance to avoid toxicity
- Traditional cod liver oil is best source. Also salmon, sardines, tuna & other fatty fish, & lard from pasture raised pigs
- Most CLO is over-processed
- Vitamins A and D cooperate to maintain calcium and phosphorus levels in the blood

Fat-soluble Activator - K

- Dr. Price referred to it as Activator X – concentrated in ‘butter oil’
- Combining butter oil and CLO produced healing in his young patients
- Vitamin K2 helps guide calcium into bone rather than soft tissues
- Beneficial for fertility, easy childbirth, normal facial development, strong bones, dental health, heart & brain health*
- Also may prevent diabetes, arthritis, cancer, kidney disease*
- Best source of K2 – dairy fats – esp. when cows are on fresh green pasture (butter oil) & egg yolks
- MK-7 in softgel best supplement (natto)
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- K1 found in green vegetables - better absorbed when they are buttered
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The water-soluble B vitamins

- Vitamin B1 (thiamin) – critical for brain health. Found in animal food (esp. pork) and certain seed/grains
- Vitamin B1 (niacin) – essential for
- Vitamin B3 (niacin) – essential for
- Vitamin B6 – Critical for brain health, immune system, & metabolism of AA.
  - Needed to modulate homocysteine (high levels implicated in mental illness).
  - Found widely in foods, but damaged by heat.
- Vitamin B12 – essential for mental health.
  - Found in most animal foods, but absorption in complex, often flawed in elderly.
  - Supplement by shot or sublingual

Diseases against which Vitamin D Is Proven to or Suggested to Protect

- Hypercalcinia
- Convulsions, tetry and heart failure in the newborn
- Osteoporosis
- Cancer
- Heart disease
- High blood pressure
- Obesity
- Arthritis
- Mental illness, panic attacks
- Chronic pain
- Muscular weakness
- Radiation poisoning
- Diabetes
- Multiple sclerosis
- Other autoimmune diseases

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More water-soluble vitamins

- Pantothenic acid (vitamin B5) – essential for energy production.
  - Sources include meat, esp. organ meats, potatoes, tomatoes, avocado, royal bee jelly, and many foods.
- Folate – needed for many body functions, including mental health
  - Widely found in foods, esp. liver, leafy greens, oranges
  - Damaged by high heat & ultraviolet light.

- Vitamin C – found in high concentrations in nerve endings. Depleted by stress.
  - Most animals make it as needed. Man cannot but must consume in food
  - Widely available in modest amounts in food, but varies with source
  - Under stress, needs increase, supplement with whole food supplement

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Your body needs cholesterol – especially your brain

- Your brain is 60% fat, 25% of body cholesterol in in the brain
- Mother’s milk is rich in cholesterol
- Children need cholesterol for proper development of brain & nervous system
- Cholesterol-rich whole milk enhances fertility
- Dietary cholesterol helps to maintain a healthy gut
  - Low cholesterol diets can lead to ‘leaky gut syndrome’
- Essential to immune function
- Major component of myelin sheath
- Essential for nerve transmission
- Involved in all brain functions
- Must be available in adequate amounts

Why are we trying to lower cholesterol???

The dangers of lowering cholesterol

Low serum cholesterol levels:

- Seen in cancer patients, AIDS patients, & many chronic diseases
- Early sign of cancer
- Associated with violence, suicide, aggression
- Associated with memory loss, poor immunity, learning disabilities
- Associated with increased risk of death in elderly
- Seems to result from (not cause) the disease process
- Often means your body is struggling with something and you are using up your cholesterol reserves
- Makes no sense to blame cholesterol for disease!
- The cholesterol lowering business is very profitable!

Minerals

- Magnesium - essential for the conversion of vitamin D to its biologically active form
  - Responsible for many biochemical processes within the body
  - Found in many whole foods – grains, dried beans, veggies
- Iron –
  - Found in whole grains & some nuts, seeds, veggies
- Iodine: Small amounts greatly enhance absorption of calcium via a positive effect upon the hormone levels of the body – good sources: apples, prunes, nuts, grains

Minerals in our food supply are declining

Cholesterol is good for you!

- Vital to proper function throughout body
- Made in the liver and in most cells
- Transported in blood in lipoproteins
- Essential to the structure of cell membranes
- Body’s natural healing substance – steps into repair blood vessel damage
- Potent antioxidant – protects against free radicals
- Precursor to
  - Vitamin D – sunshine on skin
  - Bile – needed for fat digestion and detoxification
  - Many hormones

Lipoprotein structure (chylomicron)
ApoeA, ApoeB, ApoeC, ApoeE (apolipoproteins); T (triglycerides); C (cholesterol); green (phospholipids)

Damaged cholesterol is the culprit!

- Heat and oxygen can damage cholesterol/lipoproteins in foods
- Damaged cholesterol/lipoproteins irritate & damage blood vessels leading to plaque buildup
- Found in
  - powdered eggs & dried milk,
  - meats and fats subjected to high temperatures
- A diet of whole foods with plenty of antioxidants promotes healthy cholesterol levels.
- Normal cholesterol levels in healthy people vary widely
- Your brain needs the cholesterol and other nutrients in egg yolk!

Don’t be afraid of cholesterol!

Proper Preparation of Seed Foods
- needed to release minerals for absorption

Imitates natural factors that neutralize the seed’s “preservatives” and allow it to sprout:

Moisture
Warmth
Slight Acidity
Time

Crispy nuts
Sourdough bread
Set oatmeal to soak the night before. Serve oatmeal with plenty of butter or cream and a natural sweetener. Sprinkle coconut and/or crispy nuts on top if desired.

**What is MSG?**
- Monosodium glutamate
- The flavor enhancer
- Other names:
  - ‘Accent’
  - ‘Hydrolyzed Vegetable Protein’
  - ‘Natural Meat Tenderizer’
  - and many other names
  - Often not labeled

**Interesting facts about MSG**
- Scientists use MSG to create obese rats for research purposes
- MSG has been linked to
  - Diabetes
  - Migraines and headaches
  - Autism
  - ADHD
  - Alzheimer’s

**Where is MSG Found?**
- Campbell’s soups
- Hostess Doritos
- Lays flavored potato chips
- Top Ramen
- Betty Crocker Hamburger Helper
- Heinz canned gravy
- Swanson frozen prepared meals
- Kraft salad dressings, especially the ‘healthy’ low fat ones

**Where Else is MSG Found?**
- Burger King
- McDonald’s
- Wendy’s
- Taco Bell
- Applebees
- Kentucky Fried Chicken

**Why is MSG in Everything??**
- People choose foods with MSG added
- People eat more when MSG is added
- People become addicted to the taste
- Because of this more & more MSG is being added to more and more foods
- This is very profitable for the food industry!
- And very bad for our health!
Aspartame - NutraSweet™
The “perfect” low cal sweetener
And now Splenda™!

Facts about Aspartame
Aspartame has been associated with
• Birth defects
• Brain Cancer
• Poor diabetes control
• Depression & other emotional disorders
• Seizures
• MS like symptoms
• Neurotoxicity – memory loss, brain tumors

More about Aspartame
Why is this allowed?
• Negative studies have been suppressed
• Studies have been falsified
• Commercial influence on regulators
• Commercial influence on professional orgs (ADA – not AND – Academy of Nutr. & Diet.)
• Public discussion suppressed
• The connections are not obvious

Let’s review - Key Elements of a Healthy Diet
Make sure your diet contains sufficient high quality animal products, some raw...
High quality =
• whole dairy products from pastured cows
• eggs from pastured chickens
• meats from pastured animals
• organ meats from pastured animals
• fish eggs
• fish and shellfish
• cod liver oil
Eat plenty of good fats

More Key Elements of a Healthy Diet
• Minerals –
  – Homemade bone broths (no bouillon cubes)
  – Lacto-fermented fruits, vegetables, and drinks (sauerkraut, kefir, yogurt, kombucha)
  – Grass-fed raw milk & cream/butter
  – High quality fresh fruits & vegetables (preferably organic)
  – Re-mineralized purified water
  – Use natural, mineral rich sea salts
  – Be wary of calcium supplements, which can lead to mineral imbalance
More Key Elements of a Healthy Diet

- **Vitamins** –
  - Egg yolks, Fish eggs
  - Organ meats
  - Raw/cultured milk and milk products, including butter, raw cream, raw cheese (on quality pasture)
  - Cod liver oil, butter oil
  - Grass-fed animal fats – lard, tallow
  - Fruits & vegetables in a rainbow of colors (nutrients in meat & dairy are more available)
  - High quality whole food supplements may be needed to make up for past poor diet

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This Trend is Reversible

- This beautiful woman was born of a mother with crooked teeth who improved her diet as a teenager
- Because her mother was eating a very nutritious diet, she has perfect teeth, good bone structure, and excellent health
- Nutrition does make a difference!