

Featured Topic: Glutathione (5 slides)

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Glutathione

- The body can make two antioxidants – the rest must be obtained in the diet
- One is superoxide dismutase and the other is **glutathione**
- Mechanism of action
 - Neutralizes free radicals
 - Regenerates spent antioxidants including Vitamins C and E
 - Helps the immune system fight off infections and cancer
 - Critical for detoxification: sends poisonous toxins through the liver and out of the body
- Glutathione is critical to life
 - All cells in the body can synthesize glutathione
 - People born unable to properly metabolize glutathione usually suffer from serious illnesses and will probably die early in life

The Two Faces of Glutathione

- Glutathione occurs in two forms
- The desirable form – reduced glutathione
 - Active form
 - Able to neutralize free radicals and provide all the health benefits of glutathione
 - Abbreviated as GSH
- The undesirable form – oxidized glutathione
 - Inactive glutathione
 - Must be regenerated to be effective
 - Abbreviated as GSSG

Low glutathione levels

- A healthy child has about **99% of their glutathione in the active form**, and 1% or less in the inactive form
- A healthy young adult has about **90% of their glutathione in the active form**, and about 10% in the inactive form
- But the older we get, the less active glutathione we have, and the more inactive glutathione is present
- In fact, **by age 65 we have up to 50% less of the active form of glutathione**

Other factors which reduce glutathione levels

- **Disease**
- **Poor nutrition**
- **Toxins and pollution**
- **Infections**
- **Trauma**
- **Drugs—especially acetaminophen**
- One study found that children with autism have only 60% active glutathione (and 40% in the inactive form)

Restoring glutathione levels

- The difficulty with supplemental glutathione is that it breaks down rapidly when taken orally
- The only effective way to get glutathione in its active form was to have it injected
 - Inconvenient
 - Very expensive (up to \$1000 a treatment)
- New research has found a way to stabilize glutathione so that it remains in its active form

French Research on Glutathione

- French researchers have patented a stable, oral glutathione
- Tablet dissolves in the mouth
- Shown in clinical research to increase glutathione ratios (active versus inactive) **230%** over unprotected glutathione
- Also improved glutathione ratios 73% better than NAC – a glutathione precursor

Who can benefit from glutathione?

- Much of the research on glutathione has focused on brain diseases, especially Parkinson's disease
- Also use for
 - Cancer
 - Autism
 - Diabetes
 - Depression
 - Arthritis
 - Lyme disease
 - HIV/Aids
 - Any disease of the brain/nervous system

Take 150 mg of active (reduced) glutathione twice daily, allowing it to dissolve under the tongue.
Don't eat or drink until the tablet has dissolved.

Diabetes Shortens Your Life

(1 slide)

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Diabetes = a shorter life with greater disability

- A new study finds that diabetes **takes about 3 years off your total life expectancy**
- Additionally:
 - At age 50, a diabetic man can expect to live another 30 years, on average -- **about 17 of them with disability**
 - A 50 year old woman with diabetes will likely live about 34 more years, but **will have a disability for about 21 of them**
- Disability includes: vision loss, decline in mental function, movement problems and amputations
- 30% of Americans with diabetes don't even know they have a blood sugar problem

Fun Food Facts: Watermelon

from the National Watermelon Board
(1 slide)

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Fun facts about watermelon

- The first recorded watermelon harvest was almost 5,000 years ago in Egypt
- By weight, **watermelon is the most consumed melon** in the United States, followed by cantaloupe and honey dew
- Watermelon is 92% water
- The **whole watermelon is edible**, even the rind
 - Pickled watermelon rind is popular in China and Russia
- Watermelons have up to **1.5 times more lycopene** than tomatoes
 - Also good sources of vitamin C, B6 and beta carotene

**Nutrient of the Day:
Omega-7
(5 slides)**

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Omega-7 – an “unknown” fatty acid?

- Best known omega fatty acids: omega-3, including EPA and DHA
 - A 2012 National Health Statistics Report found **fish oil the most popular natural product** used by both adults and children
- But have you heard of omega-7?
 - Anti-inflammatory, reduces insulin resistance, and restores dry tissues, especially the eyes and skin
- Found in some fish (salmon and anchovy), olive and macadamia oil, and **sea buckthorn oil**

Research on Omega-7

- **Omega-7** from sea buckthorn was shown in a clinical study to **improve skin moisture by 49% and skin elasticity by 29%**
- In a clinical study of 100 people with dry eyes, omega-7 from sea buckthorn berry and seed oil (SBA24) significantly relieved dry eye symptoms, including redness and burning
- Separate study on women with Sjogren's syndrome (disease causing dry mucous membranes, including dry mouth and dry eyes)
 - Omega-7 from SBA24 significantly improved moisture and decreased dry mouth and eyes

More Uses for Omega-7 Sea Buckthorn Oil

- Metabolic syndrome
 - Clinical trial of overweight women found that sea buckthorn with omega-7 was associated with a small reduction in waist size and markers of inflammation
- Peptic Ulcers
- Prevention of atherosclerosis and heart disease
- Vaginal dryness, especially in post-menopausal women
- **Any health condition involving inflammation, especially involving the mucous membranes**

Sea Buckthorn Versus “Purified” Fish Omega-7

Sea Buckthorn Berry

- Natural, unchanged form from berry
 - Gentle CO2 extract
 - No exposure to high temperatures
 - No solvents
- Full range of omega fatty acids plus other healthy compounds
- **Result:** stable oil with no change to the key compounds – EXACTLY as they occur in nature!
- No concerns with sustainability – ample supply

Fish

- Highly processed and refined
 - Extracted with toxic solvents
 - Bleached
 - Molecular and fractional distillation
 - Purification
- **Result:** altered triglyceride ethyl ester oil, the least stable and least absorbable form of oil
- Overprocessing = rancidity
- Solvent residue? Contamination by PCB and other toxins? Sustainability?
- Less omega-7 per capsule than in Sea Buckthorn Berry Oil

How Much to Take and What to Look For

- Look for omega-7 from Sea Buckthorn berry (pulp) AND seed, supercritical CO2 extract, hand harvested,
- Dosage: For basic health maintenance, 500 mg daily of Sea Buckthorn Oil (yielding 150 mg of omega-7)
- Capsules can be chewed and the oil swished in the mouth – the taste is relatively mild and bathing the mouth tissues directly can be helpful for certain conditions

Vitamin D for PMS

(1 slide)

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Vitamin D Relieves PMS Symptoms

- 158 young women with severe PMS symptoms who also had low vitamin D levels
- Received either a placebo, or loading dose of 200,000 IU of vitamin D followed by 25,000 IU every other week for 4 months
- Results:
 - No changes in the placebo group
 - Vitamin D levels reached the normal range in the treatment group after one month
 - Vitamin D group also saw a 60% reduction in anxiety score, 46% reduction in irritability score, 26% reduction in crying easily score, and a 40% reduction in sadness score
 - No adverse effects detected

Coffee and Cancer (1 slide)

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Coffee drinking prevents colon cancer

- Researchers at the University of Southern California looked at 5,100 men and women with colon cancer, and 4,000 people who did NOT have colon cancer as a control group
- All the participants reported their daily intake of coffee (instant, caffeinated and decaffeinated, espresso, etc.)
- Results
 - Moderate coffee intake (1 or 2 servings daily) was associated with up to a 26% reduction in colon cancer risk
 - More than **2.5 servings of coffee daily** (whether caffeinated or not) **reduced colon cancer risk by 50%**
- Coffee contains protective compounds which have been shown to **increase antioxidant activity** in the body as well as **accelerate detoxification** of cancerous toxins