

Back to My Roots: Selenium Research



The Power of Prevention

Over 11 million people have cancer in USA, and over 5% of those with cancer are expected to die this year due to cancer.

*Source: Weaver KE, Forsythe LP, et. al.; *Cancer Epidemiology, Biomarkers, and Prevention*; November 2012; 21:2108-2117.*



The Power of Prevention

The Good News: More than half of all cancers can be PREVENTED through healthy lifestyles



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The Bottom Line

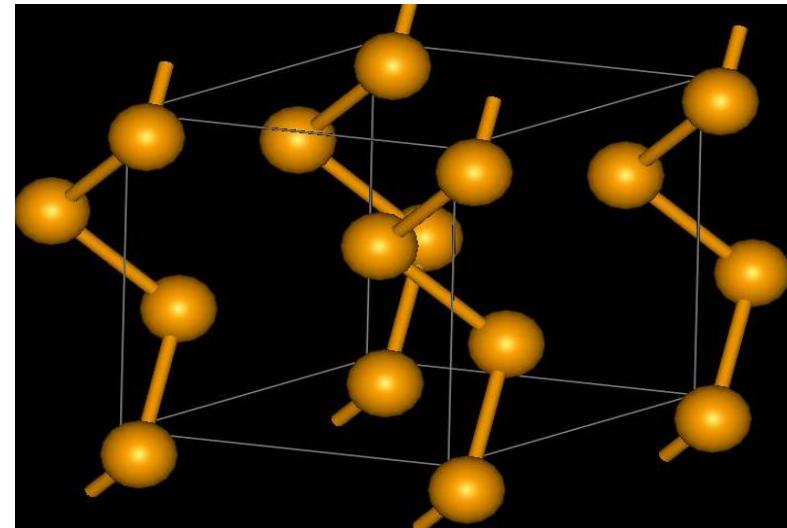
An ounce of prevention is worth a
POUND of cure!



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Which antioxidant is the first line of defense?

Selenium



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Selenium acts as an active component of the important enzyme, glutathione peroxidase, which helps combat production of harmful free radicals.



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Antioxidant Role

Selenium plays an important role in our bodies natural defense against “free radicals”.



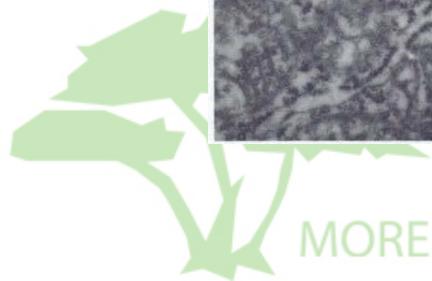
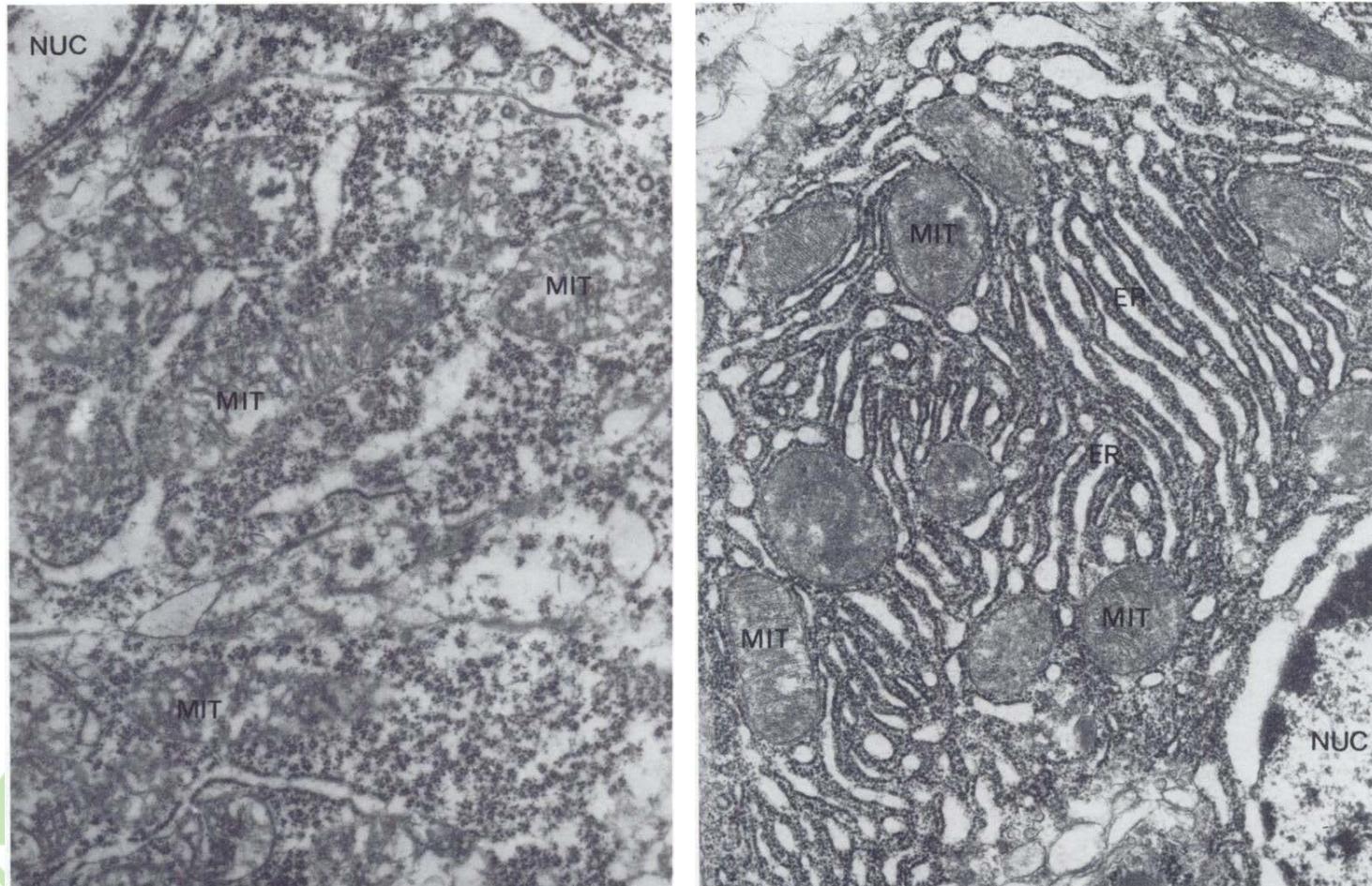
What are free radicals?

These very unstable “free radicals” are known to cause cellular damage in the body.



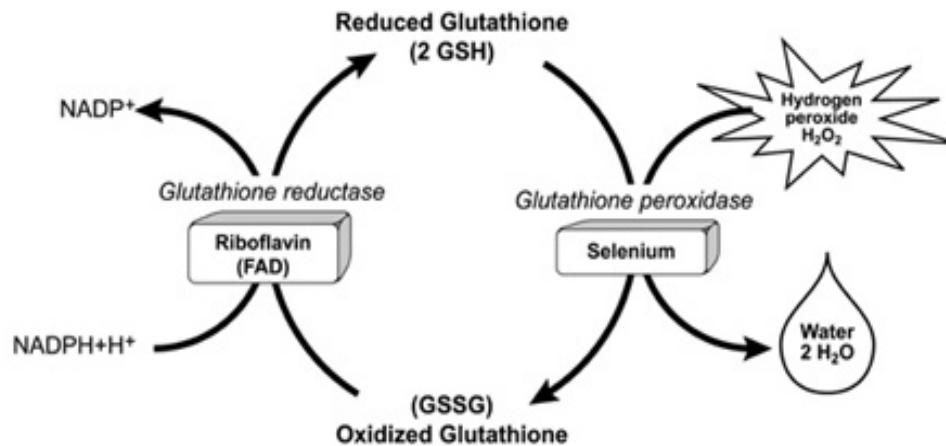
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Cellular damage if Se deficient



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Biochemical Role of Selenium



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Biochemical Role of Selenium

Does selenium form make a difference?



Biochemical Role of Selenium

Which is clinically proven to be most effective form?

High Selenium Supplement
Seleno Excell®



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SelenoExcell®

High Selenium Yeast

Supported by a Clinical Trial Agreement
with the National Cancer Institute



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JAMA

(Clark & Combs et al.)

NCI funded, Gold Standard, double blinded clinical trial that resulted in a 50-63% reduction in colon, lung and prostate cancers.

Source: Clark et al, JAMA, Dec. 25, 1996-vol. 276, No.24



Biochemical Role of Selenium

Which is clinically proven to be most effective form?



Selenium Research

Researchers at the Penn State University Cancer Institute found that supplementation with SelenoExcell®, reduced serum PSA levels, a risk indicator for prostate cancer

Source: *El-Bayoumy et al, Cancer Epidemiology Vol. 11, 1459-1465, Nov., 2002*



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New Selenium Research

**Actionable research published recently by
Penn State Cancer Research Institute**

Results shown on next slide...



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Biomarker Study:

Selenium form makes a difference!

- **Higher levels of:**
 - Pyruvate Kinase
 - HSP70
 - Elongation factor 2
- **Lower levels of:**
 - Eukaryotic Translation Initiation Factor 5A-2
 - Triosephosphate Isomerase

*Source: El-Bayoumy et. al.; Journal of Proteomics 2012
Jan 4; 75(3): pages 1018-30.*



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FDA Qualified Health Claim for selenium and cancer prevention:

Selenium may reduce the risk of certain cancers.

Some scientific evidence suggests that consumption of selenium may reduce the risk of certain forms of cancer. However, FDA has determined that this evidence is limited and not conclusive.



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SelenoExcell®

High Selenium Yeast

NCI Standardized Form

Natural food form of selenium; 100% organically protein-bound selenium

Composed of selenocompounds such as selenomethionine, selenocysteine, methy-selenocysteine and many others

Selected as the sole intervention agent by NCI for clinical trials
(Clinical Trial Agreement signed in 1998 with NCI)



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On March 9, 2009, the FDA granted a "Letter of No Objection" GRAS petition for SelenoExcell® to be used in the functional food industry.



Potential Product Applications

- Snack foods
- Cereal / Energy bars
- Breakfast cereals
- Yogurts & Smoothies
- Soups and stews
- Beverages & Juices
- Dried & Canned Pasta
- Frozen/Prepared Entrees
- Bakery products
- Cookies & Crackers
- Breakfast eggs
- Pet foods
- Confectionery
- Tonics & Elixirs
- Oatmeal
- Non-dairy milk
including soy, almond,
hemp, rice, and oat milks

SelenoExcell®

High Selenium Yeast

Particles of uniform size and shape meet stringent mesh requirements

Consistent with minimal batch-to-batch variation

Easily blended with powders and opaque liquids

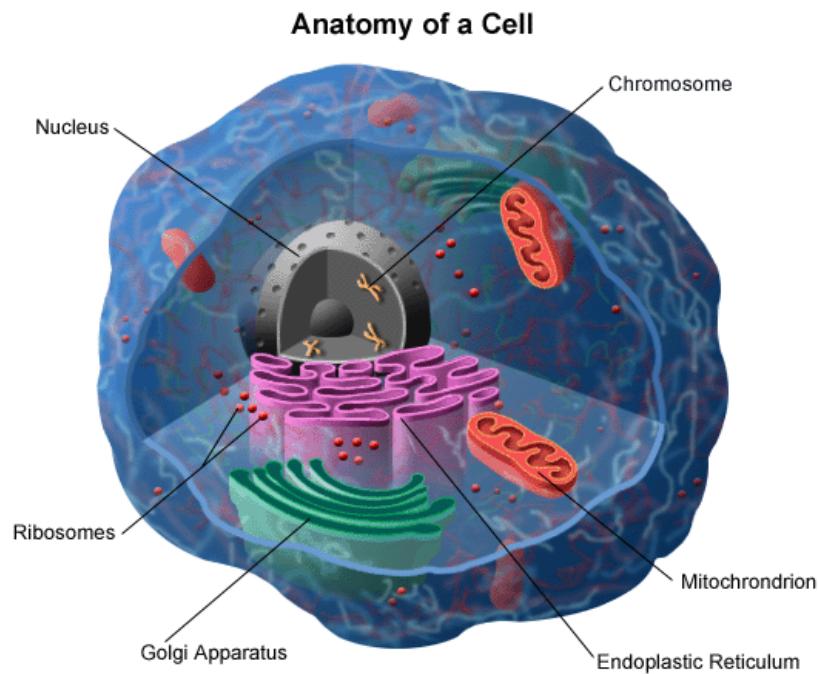
3-5 years shelf life



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Additional conditions that can be improved or prevented by Selenium

- Cognitive
- Immune Health
- Anti-Aging



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Condition Specific Role of Selenium



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SelenoExcell®

High Selenium Yeast

Wholesome & highly bioavailable Selenium

The ONLY selenium source with FDA
GRAS Notification

The body's first line of defense



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SelenoExcell[®]

High Selenium Yeast

Proven in Gold-Standard clinical trials

The ONLY certified 100% organically protein-bound form which is standardized with the National Cancer Institute



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New Clinical Trials (2013)

Two new long-term cancer prevention
clinical trials to be un-blinded in 2013

Great to be back to my roots!!

Second Chances Really Do Exist in
America!

www.jpw3.org