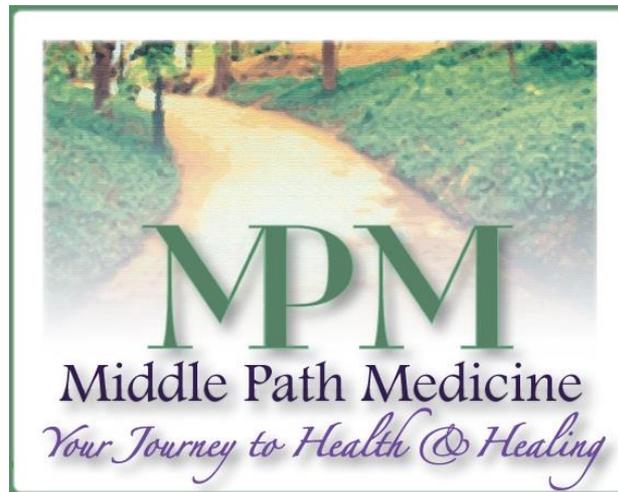


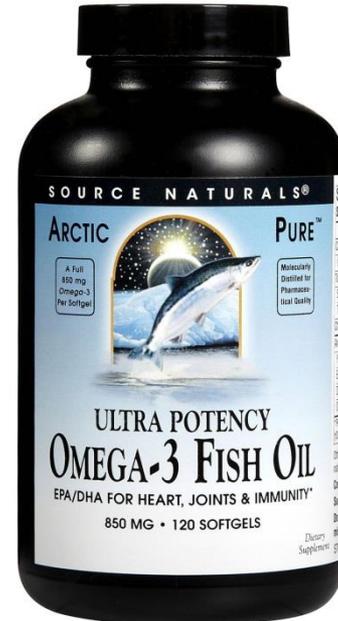
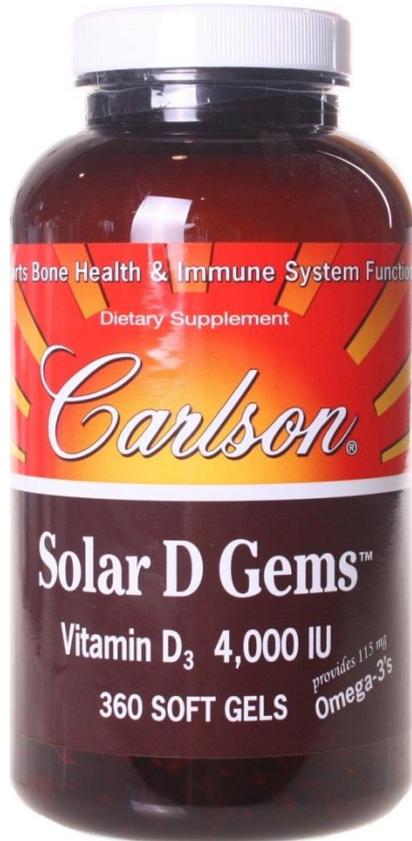
# **Nutritional Supplements: The Good, the Bad, & the Ugly**

Gary E. Foresman, MD

November 2011



# The Good (Best, Actually)



6/29/94



“Face it, Fred—you’re lost.”

# Multivitamins (MVIs)

**Life Force Multiple by Source Naturals** – 2 caps twice per day with food. Nationally recognized as the highest ranked MVI (by The Comparative Guide to Nutritional Supplements), it provides a broad basis of B-vitamins, antioxidants, and multi-nutritional support meant to optimize wellbeing. MVIs have been shown to decrease the risk of colon cancer by 75%, decrease the risk of infections and are recommended by all health organizations, even the American Medical Association.

# **Multivitamins (MVIs)**

Other good MVIs include **Ultra Nutrient** (esp. for athletes) and **Daily Stress Formula** (for those under stress) by **Pure Encapsulations**, and **Ultra Preventative – X** (includes many phytonutrients for those with low fruit and vegetable intake) by **Douglas Labs**. For people who have difficulty tolerating multivitamins I suggest food - based MVIs such as **Life's Fortune** and **Pure Food Nutrients** .

# Multivitamins (MVIs)

Most men's and women's MVIs are poorly formulated and made only as a marketing ploy. The following exceptions are unique MVIs for specific groups:

**Women's Nutrients by Pure Encapsulations** (for premenopausal woman balancing their hormonal cycle), **Fem Prenatal by Metagenics** (true nutritional support for women who are trying to conceive or who are pregnant – far, far superior to prescription prenatal MVIs), **Menopause Multiple by Source Naturals** (great support for help of perimenopausal symptoms), and finally **Men's Nutrients by Pure Encapsulations** (a men's multi with excellent herbal support for prostate, strength, and libido).

# **Multivitamins (MVs)**

Although most multi vitamins contain a multi-mineral, the level of minerals is not enough to help most women or men with osteopenia or osteoporosis to adequately maintain and improve bone health, and an additional multi-mineral may be required.

# **“MVI Use...In the Women’s Health Initiative”**

- 161,808 participants, postmenopausal women
- 41.5% of participants used MVIs, primarily Centrum-type MVIs
- After a median follow up of eight years, MVIs had no influence on the risk of common cancers, cardiovascular disease, or total mortality in postmenopausal women

Arch Int. Med. Feb 9, 2009. 294-304

# “MVI Use and Risk of Prostate Cancer”

- 295,344 men, part of NIH-AARP Diet and Health Study
- Self-reported use of MVI was ascertained and patients were followed prospectively for five years
- 32% increased risk of advanced prostate cancer
- 98% increased risk of fatal prostate cancer

J Natl Cancer Inst. May 2007. 754-64

# **“MVI Use and Breast Cancer Incidence”**

- Prospective examination of the association between MVI use and the incidence of invasive breast cancer
- 35,329 cancer free women followed for 9.5 years
- MVI users had a 19% increased risk of invasive breast cancer

Am J Clin Nutr. May 2010. 1268-72

# **Dietary Supplements and Mortality in Older Women**

## **The Iowa Women's Health Study**

**Arch Int Med Vol 171(18):1625-33, Oct 10, 2011**

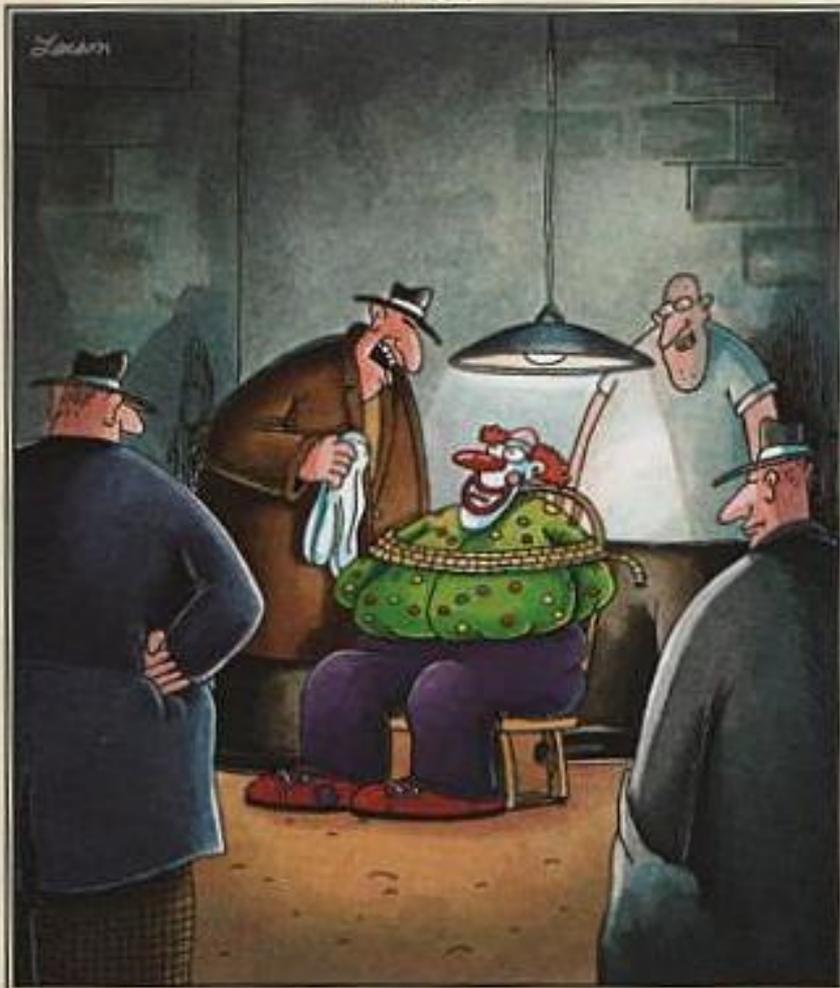
- Assess mortality in 38,772 women (avg age 61.6) from 1986 thru 2008 and utilizing self-report of supplement use in 1986,'97 and '04.
- 99.2% Caucasian, 98.6% post-menopausal
- By 2004 only 19,124 women with evaluable questionnaires. By 2008 15,594 deaths were registered.
- Calcium supplements associated with a 13% reduction (entirely from a decreased cancer risk - plausible) in all-cause mortality. Accompanying editorial notes that this is the only study ever to hint at such an outcome that this study and goes against every other study published documenting an average 30% increased cardiovascular risk with calcium supplements.
- Iron and copper supplements associated with worsening cardiovascular and cancer risks – plausible.
- **Valid Conclusion** : If you are a white, post-menopausal women only take well-balanced multi-vitamin and multi-mineral preparations after careful evaluation with a health-care professional knowledgeable about supplements.

# **Calcium Supplements and the Risk of Cardiovascular Events in the Women's Health Initiative**

## **British Medical Journal 2011**

- A review of five previous trials notes an increased risk of myocardial infarction of 31% in women on calcium supplements. Increased overall mortality ranges from 7%-20%.
- As most trials utilizing vitamin D without calcium indicate prevention of cardiovascular events the actual risk associated with calcium-only supplements is assumed to be significantly worse.
- In the WHI alone, calcium supplements alone increased the risk of MI 24%!

12/26/94



“The *first* thing I’m gonna do is wipe that smile off your face!”

# **The European Prospective Investigation into Cancer and Nutrition in German cohort (EPIC-Heidelberg)**

**Eur J Nutr, July 21, 2011**

- 23,943 participants free of cardiovascular disease and cancer at baseline recruited in 1994-1998 and followed for an average of 11 years, 1101 deaths were registered.
- Overall no significant effect of supplement use and cancer or overall mortality were noted, however:
- People taking antioxidant vitamin supplements *at the beginning of the trial*, had a **48%** reduction in cancer mortality, and an overall **42% reduction in all-cause mortality**.
- Baseline non-users who started taking during the follow-up period had a **74%** increase in cancer mortality and an overall **58% increase in all-cause mortality**.
- Prospective Supplement studies need to be cautious of the “**sick-user effect**”!

# **“Use of MVIs, Vitamin C, and Vitamin E in Relation to Mortality”**

- 77,719 Washington State residents (both men and women) aged 50-76
- Men and women without pre-existing heart disease had a 22% reduction in cardiovascular mortality
- People who took MVIs had much higher education status and healthy behaviors which “confounded” a statistically significant 13% reduction in overall mortality
- Addition of C and E led to further significant improvements in overall mortality, the higher the dose the better

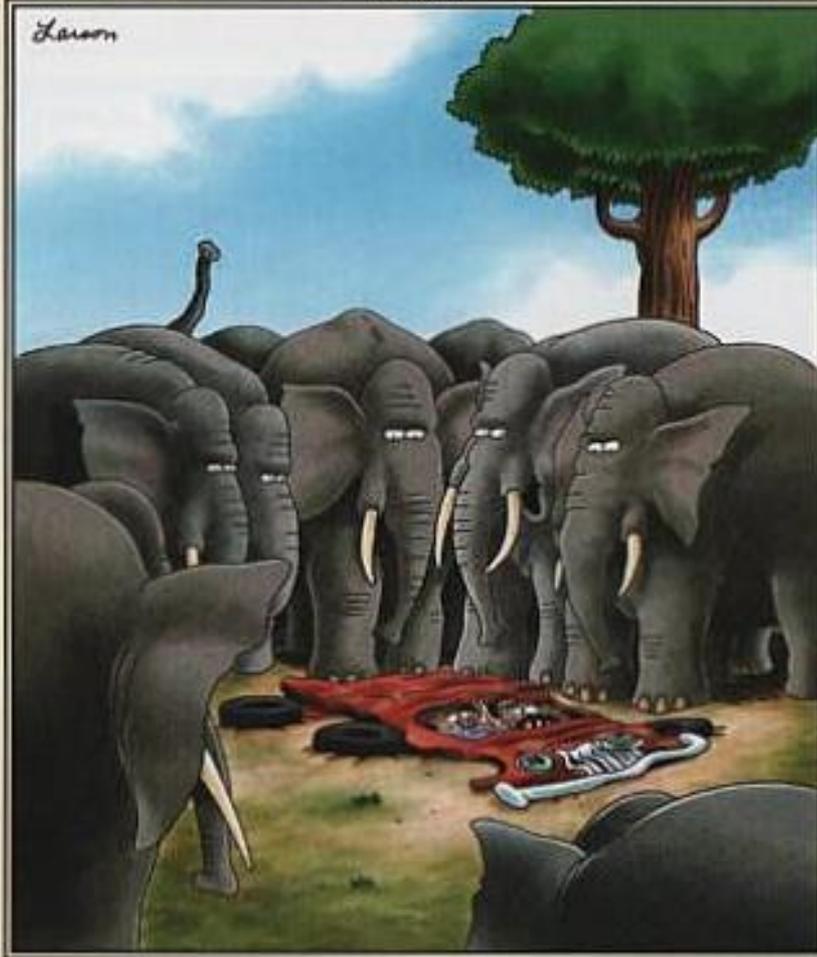
# “MVI Use and the Risk of Myocardial Infarction...”

- 31,671 women with no history of CVD, age 49-83, followed for 10.2 years
- MVI users had a 30% reduction in risk of MI
- Those who used an MVI for greater than five years in this trial had an overall 41% decreased risk of MI
- In a parallel trial of 2,262 women **with** a history of CVD, MVIs had no benefit

Am J Clin Nutr. Nov 2010. 1251-56

7/27/94

*Lalorn*



“You know, sometimes I sort of enjoy  
this herd mentality.”

# **Fish Oils/Essential Fatty Acids/EPA and DHA**

**Cod Liver Oil (flavored) by Carlson** – one Tbsp. daily, or **fish oil capsules** daily as needed to add up to an average of *EPA+DHA combined equal to 2000mg-3000mg per day*, brands include **Arctic Pure, Pure Encapsulations**.

Keep all oils refrigerated after opening. One of the most common nutritional deficiencies in America is the lack of healthy Omega 3 fatty acids. Important in brain health, joint health, the prevention of sudden cardiac death, immune health, emotional stability and a myriad of other documented benefits.

Fish Oils are essential for anyone not eating 3 servings of cold-water fish per week.

# Fish Oils/Essential Fatty Acids/EPA and DHA

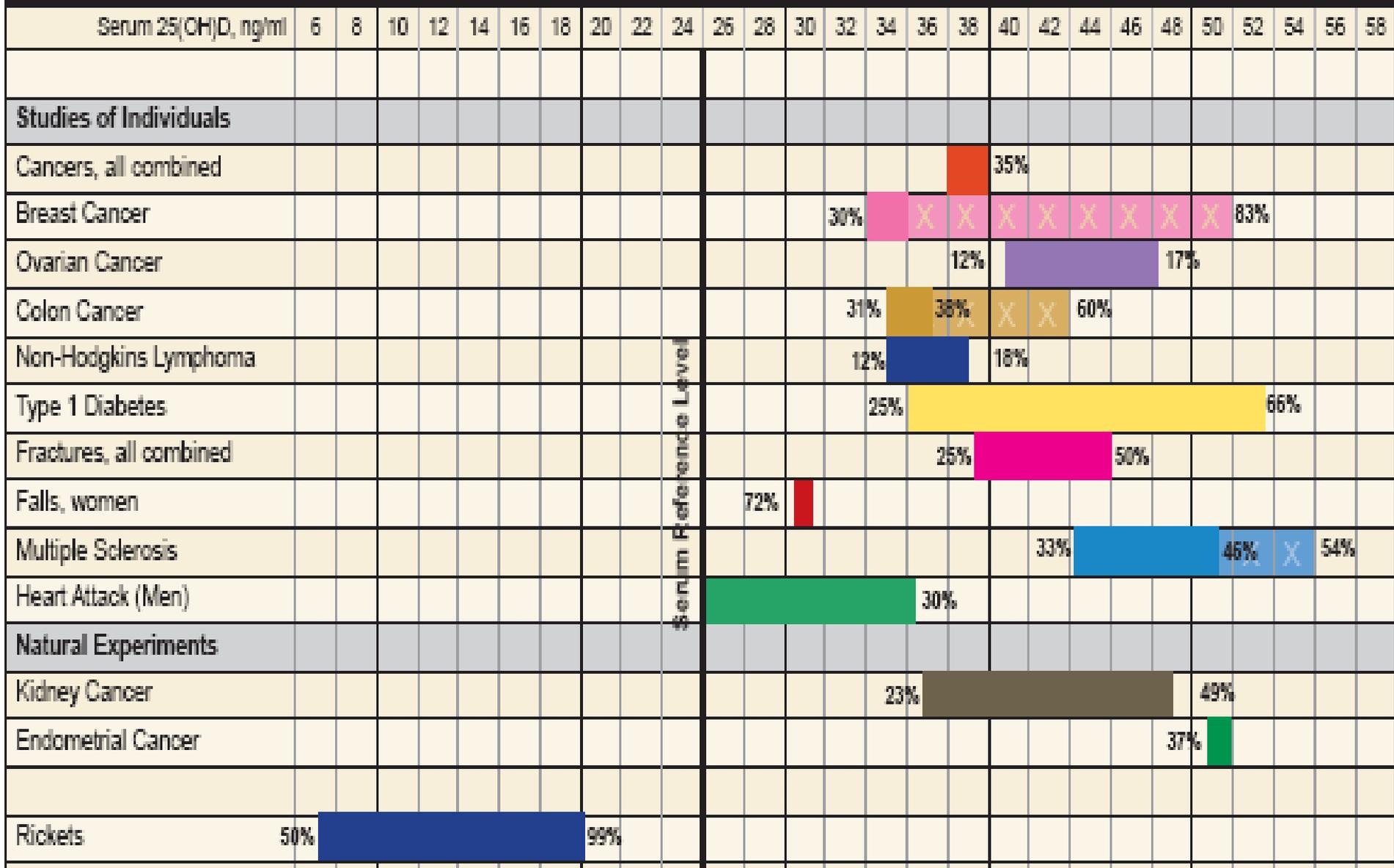
Most fish oil supplements are *rancid fat pellets* that can hurt your health, so only buy the best quality when it comes to this supplement, or nothing at all. Flax oil may have unique health properties, but in no way shape or form can it replace fish oils. Don't fall for the 3 6-9 combos out there as every American is oversaturated with Omega 6s and 9s and supplementing with these is totally unnecessary.



# Vitamin D<sub>3</sub>

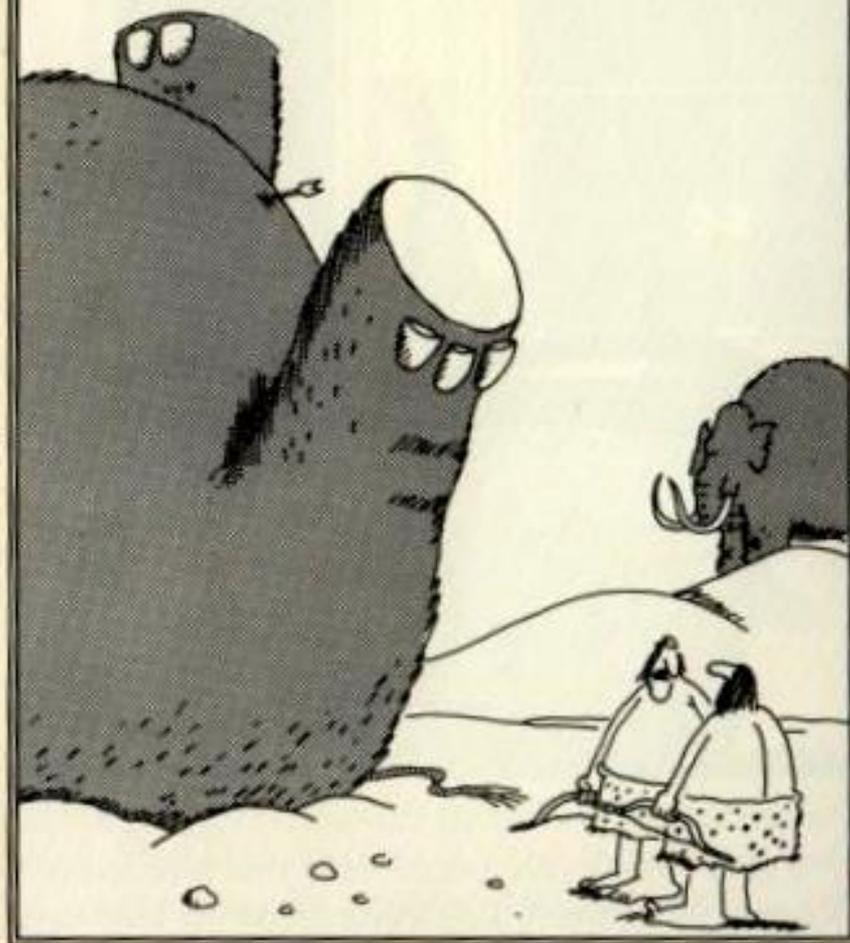
Vitamin D<sub>3</sub> is the only vitamin proven to prolong life. Vitamin D<sub>3</sub> is actually a steroid hormone which your body produces when exposed to the sun. D<sub>3</sub> helps prevent a variety of auto-immune diseases and cancers, including breast and prostate. Also, it helps decrease the risk of heart attack, so it does much more than just promote bone health. The optimal dosage is usually 2000 IU to 8000 IU daily and levels can be monitored by your doctor.

# Disease Incidence Prevention by Serum 25(OH)D Level



7/21/86

Larson



"We should write that spot down."

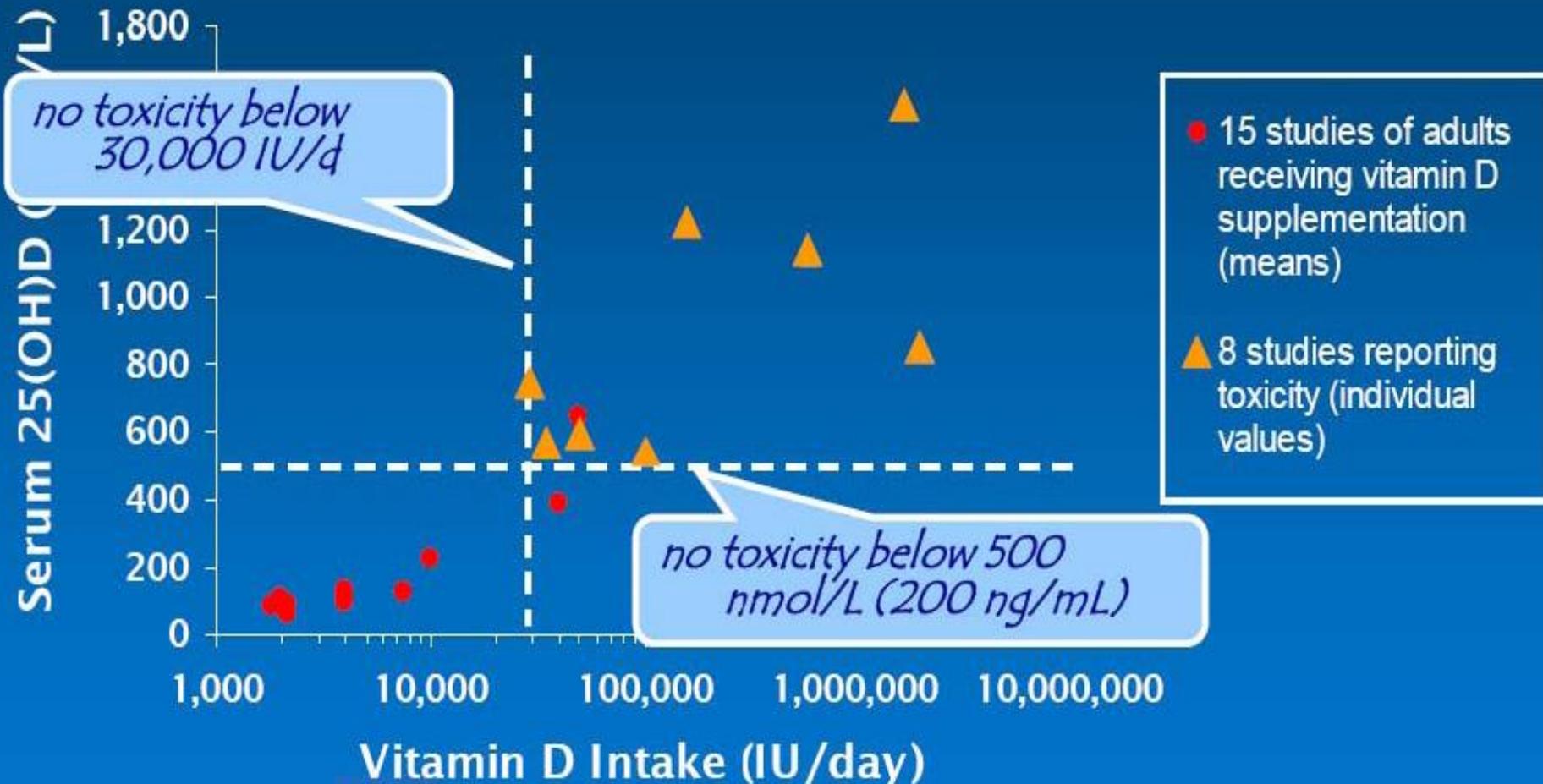
# Cholecalciferol = Vitamin D<sub>3</sub>

- Cholecalciferol is the naturally occurring form of vitamin D.
- Cholecalciferol is made in large quantities in your skin when sunlight strikes bare skin.
- Can synthesize 20,000 IU per day by direct sun exposure at lower latitudes, especially with sweating in the sun
- It can also be taken as a supplement
- Ergocalciferol = Vitamin D<sub>2</sub>, which comes from ergosterol, the biological equivalent of cholesterol in fungal cell membranes when exposed to ultraviolet light.
- Not bioequivalent to D<sub>3</sub>, only reason to use D<sub>2</sub> is to make Eli Lilly money.

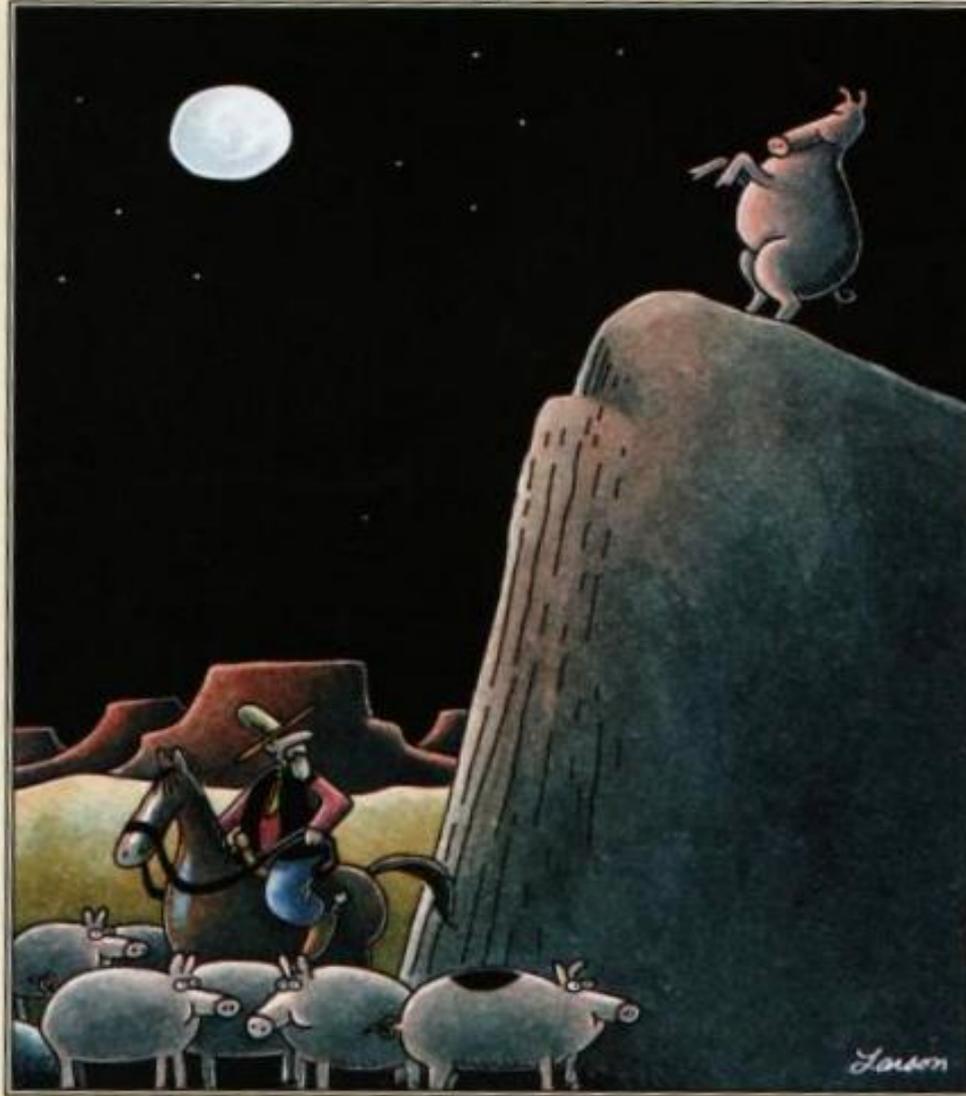
# Use Vitamin D<sub>3</sub>

- Supplementation should be with D<sub>3</sub> not D<sub>2</sub>
  - Trang, H., et al., “Evidence that vitamin D<sub>3</sub> increases serum 25-hydroxyvitamin D more efficiently than does vitamin D<sub>2</sub>. Amer Jour Clin Nutr 1998; 68:854-58.
  - Armas, L., et al., “Vitamin D<sub>2</sub> is much less effective than vitamin D<sub>3</sub> in humans,” Jour Clin Endocrinol Metab 2004; 89:5387-391.

# VITAMIN D INTAKE & TOXICITY\*



4/23/84



Trying to calm the herd, Jake himself was suddenly awestruck by the image of beauty and unbridled fury on the cliff above. Pink Shadow had returned.

# Anti-Oxidant Cocktail

Not everyone needs extra antioxidants, but this combination is especially useful for people under stress, smokers, exercisers, and for people with a low phase-angle on their BIA test. Although one can consider so many other antioxidants, these three have been proven to work synergistically and enhance your body's own natural antioxidant system, glutathione. If you don't consume 5-8 servings of fruits and vegetables daily I also strongly suggest supplementing with a well-balanced **Greens Supplement** such as **NanoGreens** one scoop per day in water (quite tasty).

- **Vitamin C - Systemic C** by **Source Naturals** or **Emergen-C** at 1000mg twice per day with food. Look for non acidic forms of C such as these.
- **Vitamin E – Mixed Tocopherols (Unique E)** taken as a 400 IU soft gel daily
- **Alpha Lipoic Acid** - 300mg timed release, once or twice daily with food

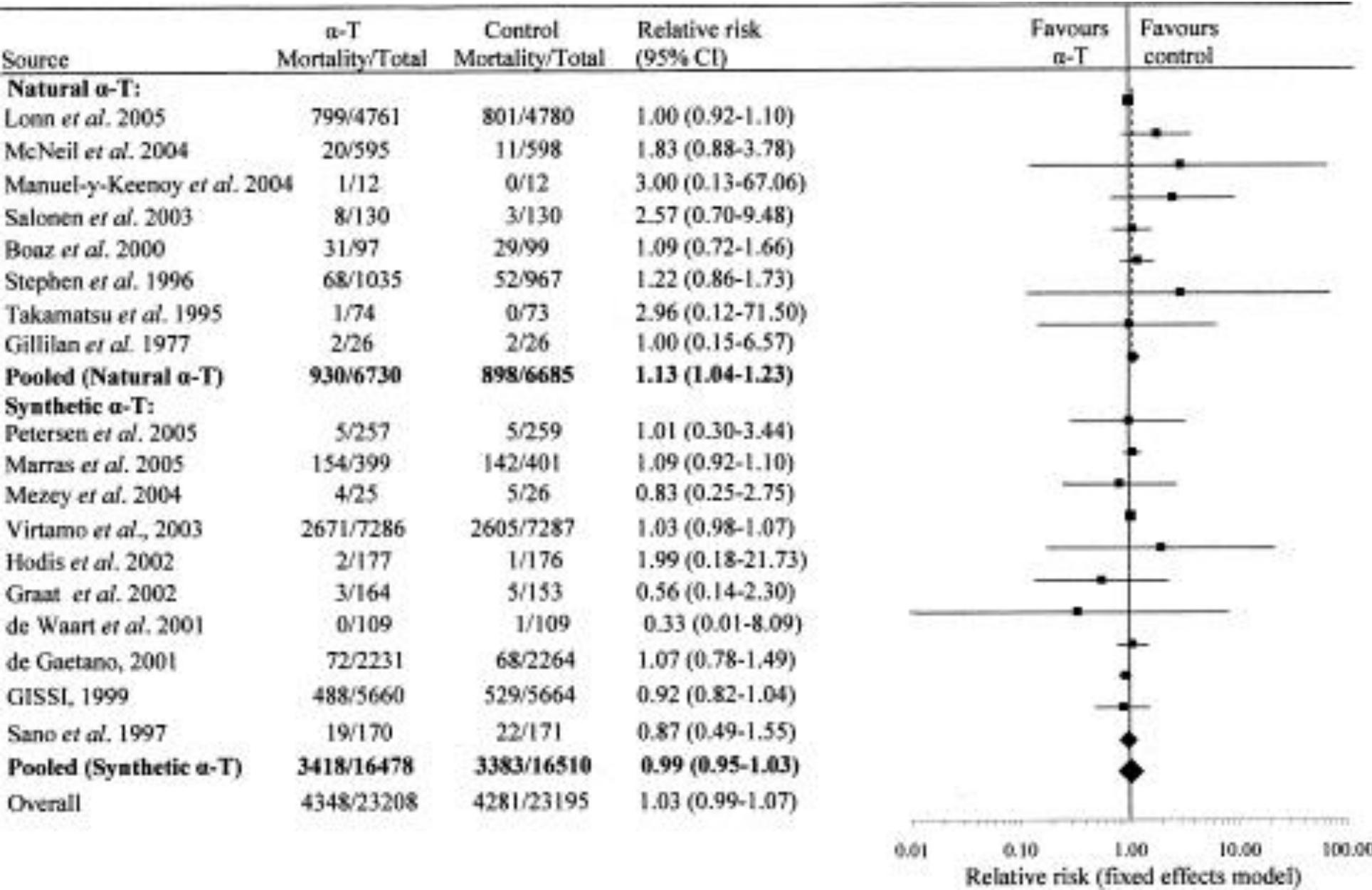
# Anti-Oxidant Cocktail

- **Vitamin C** is an essential water-soluble anti-oxidant which our body can absorb in higher and higher doses under times of stress, whether physical, emotional, or due to infection. Increasing dosage to 1000mg every 2-3 hours during high times of stress, such as for an acute infection, is recommended. Misinformation about Vitamin C is abundant, including the myth that it causes kidney stones, whereas in fact it has been shown to prevent them.
- **Alpha Lipoic Acid** (a mixed anti-oxidant proven to help your body regenerate Vitamin E and Vitamin C) – it is also useful in decreasing insulin resistance, and it is part of many memory and nerve health protocols.

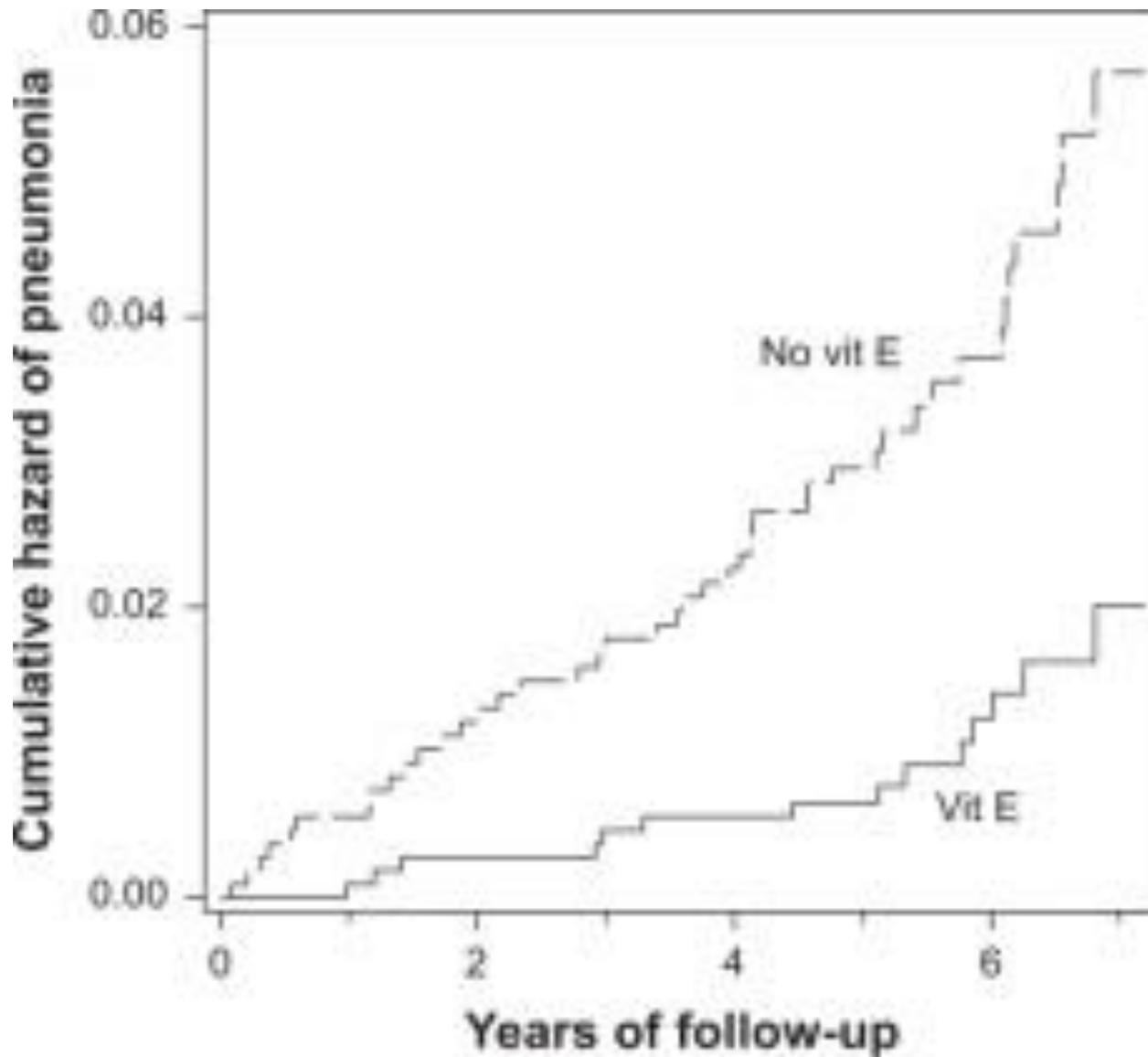
# Anti-Oxidant Cocktail

- **Vitamin E** (fat-soluble anti-oxidant) is one of today's most misunderstood supplements. **Mixed Tocopherols (Unique E)** have been used successfully in treating liver disease, arthritis, allergies, and many other disorders; gamma tocopherol is essential in the prevention of breast and prostate cancer. *Tocopherol succinate* is useful as part of a cancer treatment/prevention regimen.

# Vitamin E & Mortality



# Vitamin E & Pneumonia in Smokers



# Final Thoughts

Although there are many other healthy vitamins and supplements to consider for specific conditions, this is a good start on nutrients to support a general healthy lifestyle including **exercise, stress-reduction** and a **good, whole-food diet** rich in fruits and vegetables and low in processed foods.



"Say ... what's a mountain goat doing way up here in a cloud bank?"