



To learn about everything that makes SLENDA® Sucralose the sweetener of choice, [click here.](#)

TATE & LYLE

[HEADLINES](#) [TOPICS](#) [PRODUCT NEWS](#) [HEALTH CONDITIONS](#) [PRODUCTS](#) [JOBS](#) [EVENTS](#)

Search

HEADLINES

[Research](#)
[Industry](#)
[Regulation](#)
[Consumer Trends](#)

TOPICS

[DMAA](#)
[GMPs, QA & QC](#)
[Product claims](#)
[NDI draft guidance](#)
[Omega-3](#)
[Manufacturer insights](#)
[Probiotics](#)
[Vitamin D](#)

HEADLINES > RESEARCH

4 10 1 2
 Like Share

"RESULTS THAT CANNOT BE IGNORED"

Selenium + CoQ10 supplements may slash cardiovascular mortality: RCT



By Stephen Daniells+
 25-May-2012

[Post a comment](#)

Related topics: [Research](#), [Antioxidants](#), [carotenoids](#), [Minerals](#), [Cardiovascular health](#)

Long-term supplementation with a combination of selenium and coenzyme Q10 may decrease cardiovascular mortality by about 6%, according to a new study from Sweden with 'results that cannot be ignored'.

Four years of supplementation with 200 mg/day of coenzyme Q10 plus 200 micrograms per day of organic selenium yeast was also associated with significant improvements in cardiac function, according to findings published in the *International Journal of Cardiology*.



Researchers from Linköping University and the Karolinska Institutet suggest that the effects of the supplements may be synergistic since selenium is essential for the activity of selenoproteins, including TrxR1 which is said to be vital for the efficacy of CoQ10.

Selenium intakes are below the optimal levels in Scandinavia because selenium levels in the soil are low (and selenium levels in crops are therefore lower than the US, for example). Therefore, selenium supplements would improve TrxR1 activity, which in turn would improve the efficacy of CoQ10.

"Results that cannot be ignored"

Commenting on the study, Cara Welch, PhD, VP of scientific & regulatory affairs for the Natural Products Association (NPA) told NutraIngredients-USA that it was a small but well-designed study with "results that cannot be ignored".

Dr Welch added that not only did the study demonstrate that selenium plus CoQ10 significantly reduced the chance of cardiovascular death, but the observed reduction of levels of a cardiac biomarker and echocardiographic measurements even hinted at a possible mechanism of action.

"I look forward to seeing further studies to support the use of selenium and coenzyme Q10 for improved cardiovascular health."

Hitting the high points

Duffy MacKay, ND, VP of scientific & regulatory affairs for the Council for Responsible Nutrition (CRN), said that this is the type of evidence that the industry needs to be producing to show how nutrition contributes to health and

FEATURED JOBS IN THE USA



R&d Formulator (Northwest)

Betty Lou's Inc.

Quality Control Manager Job

Pepsico (South)

Forklift Operator - Wh (wh0... (South)

Pepsi Bottling Ve...

[SEARCH JOBS](#)

[Post a job](#)

PYCNOGENOL
 NATURE'S SUPER ANTIOXIDANT
 Effective in helping to give skin a more healthy, vibrant look...

MOST POPULAR NEWS

- 1** [Abbott Nutrition: 'Cognition research is one of our top global priorities'](#)
- 2** [Dendrobium-containing Craze pre-workout supplement hit with CA class action](#)
- 3** [Both sides claim victory as judge rules in FTC v POM false advertising case](#)
- 4** [Optimal vitamin D linked to lower heart disease death: Study](#)
- 5** [Industry braced for senate vote on Durbin's controversial dietary supplement registration amendment](#)

wellness, and he commended the researchers and the sponsors for the study.

"Not only is this well done but it also hits a lot of the high points where nutrient studies can be criticized," he said. "They used a very well characterized material with well documented bioavailability, and they tested a strong hypothesis.

"They also chose a target population [healthy seniors] where they were likely to see a result. The only downside to seniors is that they are hard to keep in the study and the study had a significant dropout of about 50% in both groups.

"This study creates a nice set of evidence for other researchers to build on."

Study details

The Swedish researchers, led by Urban Alehagen, MD, PhD, investigated the 'vital relationship' between the two substances in a randomized double-blind placebo-controlled trial with 443 Swedish citizens aged between 70 and 88 (228 participants completed the study).

Participants were randomly assigned to receive either 200 mg per day of coenzyme Q10 capsules (Bio-Quinon, Pharma Nord, Denmark) and 200 micrograms per day of organic selenium yeast tablets (SelenoPrecise, Pharma Nord, Denmark), or similar placebo for 48 months.

Results showed that 12.6% of people in the placebo group died of cardiovascular disease, compared with only 5.9% in the selenium plus CoQ10 group.

SPONSORED LINK

[Traceable, sustainable omega-3s from Cyvex](#)

Now there's an omega-3 supplier whose traceable catch is harvested from sustainable menhaden - Cyvex Nutrition. Cyvex' parent company, Omega Protein, owns the fisheries and oversees production, ensuring quality in every batch... [Click here](#)

In addition, the biomarker of tension in the heart wall called N-terminal proBNP (NT-proBNP) was also significantly lower in the supplement group, compared to placebo, said the researchers.

Data from echocardiography also revealed a *"significant better cardiac function score was found in the active supplementation compared to the placebo group"*.

"This study investigates for the first time the interrelationship between selenium and coenzyme Q10 and the compounds have been used in a therapeutic purpose to affect the [cardiac wall cells]," wrote Alehagen and his co-workers.

"We suggest that the results of this study can provide a basis for extended analyses of the effects of selenium/coenzyme Q10 on various conditions, and that further supplementation studies in larger populations involving diverse age groups should be initiated."

The study was supported by Pharma Nord Aps, Denmark, the County Council of Östergötland, Linköping University, and the Swedish Research Council. Pharma Nord Aps also donated the selenium tablets and coenzyme Q10 capsules..

Importance

Selenium is an essential macronutrient, and is considered to be an antioxidant. High levels of selenium have been inversely associated with risk of developing several cancers, including bladder, prostate and thyroid.

The mineral is included in between 50 and 100 different proteins in the body, with multifarious roles including building heart muscles and healthy sperm. However, cancer prevention remains one of the major benefits of selenium, and it is the only mineral that qualifies for a Food and Drug Administration (FDA)-approved qualified health claim for general cancer reduction incidence.

[A recent review paper by Joyce McCann and Bruce Ames](#) from the Nutrition and Metabolism Center at Children's Hospital Oakland Research Institute in Oakland (CHORI) indicated that moderate deficiency in selenium may have long-term detrimental effects (*FASEB Journal*, 2011, Vol. 25, pp. 1793-1814).

Follow @NutraUSA 2,568 followers

SUPPLIER WEBINARS

On demand Supplier Webinars

Nutritional science for mind health products
DSM Nutritional Products

Soluble Corn Fiber: What consumers want and why it's important
Tate & Lyle

[All supplier webinars](#)

PRODUCTS

OmniAct Mango – A fortified Mango (*Mangifera indica*) extract with high anti-oxidant potential
Ajinomoto NaturalSpecialities

Ginnovay® High Potency Palm and Rice Tocotrienols
Beijing Gingko Group

Xanthigen - a new class of weight loss ingredient
P.L. Thomas (PLT)

Launch of Lonza's Phosphatidylserine Brand Memree™
Lonza Ltd

WILD Flavors, Inc. H.I.T.S.® Introduces Immune1™
Wild

White Kidney Bean Extract: A Study Review
Pharmachem Laboratories

TODAY'S HEADLINES

Industry enjoys 'significant victory' over 'Durbin amendment'

'I'm off to save prostates': POM goes on offensive with new ads post FTC ruling

Antioxidant-rich tomato paste shows cardio benefits: Study

Study links calcium supplements to doubling of heart attack risk

Animal welfare group slams EU organics verdict

CoQ10 – or coenzyme Q10 plays a vital role in the production of chemical energy in mitochondria – the 'power plants' of the cell – by participating in the production of adenosine triphosphate (ATP), the body's co-called 'energy currency'.

It has been studied for its role in cognitive health, heart health, and anti-aging (in oral and topical formulations). It has also been shown to benefit those suffering from angina, heart attack and hypertension.

Source: *International Journal of Cardiology*

Published online ahead of print, doi:

“Cardiovascular mortality and N-terminal-proBNP reduced after combined selenium and coenzyme Q10 supplementation: A 5-year prospective randomized double-blind placebo-controlled trial among elderly Swedish citizens”

Authors: U. Alehagen, P. Johansson, M. Bjornstedt, A. Rosen, U. Dahlstrom

Keywords: [selenium](#), [CoQ10](#), [heart disease](#)

More news articles on this topic

[Selenium deficiency may increase risk of chronic disease: Study](#)

[Selenium yeast may reduce joint inflammation: Rodent data](#)

[Study supports potential anti-cancer effects of selenium-enriched yeast](#)

[Selenium may ease post-exercise oxidative stress in overweight people](#)

[CoQ10 may enhance anti-inflammatory potential of Med diet](#)

[CoQ10 may reduce muscle damage during intensive exercise](#)

Get more articles like this in your mailbox:

Your email

[Sign up](#)

Copyright - Unless otherwise stated all contents of this web site are © 2012 - William Reed Business Media SAS - All Rights Reserved - Full details for the use of materials on this site can be found in the [Terms & Conditions](#)

Post a comment

Comment title *

Your comment *

Your name *

Your email *

We will not publish your email on the site

I agree to [Terms and Conditions](#)

POST YOUR COMMENT

When submitted, your comment will be moderated and, once approved, will appear on the site shortly after.

RELATED PRODUCTS & SUPPLIERS

SUPPLIER WEBINARS

[Nutritional science for mind health products](#)

TECHNICAL PAPERS

[OmniAct Mango – A fortified Mango \(Mangifera indica\) extract with high anti-oxidant potential](#)

[Ginnovay® High Potency Palm and Rice Tocotrienols](#)

[XanGuard® Lutein Beadlets](#)

[Natural Pterostilbene](#)

[Meriva®: 29 fold more bioavailable](#)

An introduction to KoACT® for advanced bone strength
Chelated Mineral: The Proof Is In the Bonds
Magtein™, a Novel Compound for Cognitive Health
The Power of Phospholipid Omega-3s
Microencapsulated Low GI High Oleic Fat Powder Aims at Diabetic Nutrition

SUPPLIERS

AIBMR Life Sciences
AIDP, Inc
Ajinomoto OmniChem NaturalSpecialities
Albion Human Nutrition
Arla Foods Ingredients
Connecting Nutrition & Health
BioCell Technology – proven & effective novel dietary ingredients
Burcon NutraScience Corporation
ChromaDex (branded ingredient pTeroPure)
Croda Inc
Cyvex Nutrition Inc./ Omega Protein Corporation
Embria Health Sciences
FT Technologies
Farbest Brands
Fortitech, Inc
Gnosis S.p.A.
Hilmar Ingredients
Horphag Research (USA) Inc.
Indena: botanical ingredients for the Health Food industry
InnoBio Limited
Kangcare Bioindustry Co. Ltd
Kemin Industries
Our extraction, processing and cultivation expertise make your natural products better.
Lonza Ltd
To bring digestive and therapeutic enzymes to the world
Changsha Organic Herb Inc. Plant Extracts supplier
P.L. Thomas (PLT)
POLARIS
Prinova Group, Formerly Premium Ingredients Int'l
Stratum Nutrition
UAS Laboratories
Valensa International
Valensa International
Vital Solutions GmbH
ZMC-USA

WEEKLY / DAILY FREE NEWSLETTER

- FoodNavigator.com
Food & Beverage Development - Europe
- FoodNavigator-USA.com
Food & Beverage Development - North America
- FoodNavigator-Asia.com
Food, Beverage & Supplement Development - Asia Pacific
- NutraIngredients.com
Supplements & Nutrition - Europe
- NutraIngredients-USA.com
Supplements & Nutrition - North America
- FoodProductionDaily.com

- DairyReporter.com
Dairy Processing & Markets
- BeverageDaily.com
Beverage Technology & Markets
- ConfectioneryNews.com
Confectionery & Biscuit Processing
- BakeryAndSnacks.com
Industrial Baking & Snacks
- GlobalMeatNews.com
Global Trading and Meat Processing
- FoodManufacture.co.uk
The Information Resource for Food and Drink Processing

OTHER NEWSLETTERS

- Science & Nutrition Research
- Food legislation
- Food Finance
- Innovations in Food Ingredients
- Innovations in Food Processing and Packaging
- Innovations in Food Safety & Instrumentation
- Food Industry & Consumer Trends
- Food Marketing and Retailing

FREE E-MAIL ALERTS

- Antioxidants, carotenoids
- Fibers and carbohydrates
- Probiotics and prebiotics

- Cosmeceuticals
- Minerals
- Proteins, peptides, amino acids

- Dairy-based ingredients
- Nutritional lipids and oils
- Soy-based ingredients

- Dosage forms
- Phytochemicals, plant extracts
- Vitamins & premixes

- Bone & joint health
- Diabetes

- Cancer risk reduction
- Energy & endurance

- Cardiovascular health
- Eye health

- Cognitive and mental function
- Gut health

- Immune system

- Maternal & infant health

- Respiratory health

- Skin health

- Weight management

- Women's health

Free subscription now!

RELATED SITES FROM OUR TEAM

Food & Beverage: Food & Beverage Development - Europe | Food & Beverage Development - North America | Food, Beverage & Supplement Development - Asia Pacific | Food Marketing and Retailing | Food and Beverage Processing and Packaging | Food Safety & Quality Control | Industrial Baking & Snacks | Beverage Technology & Markets | Confectionery & Biscuit Processing | Dairy Processing & Markets | Global Trading and Meat Processing | Food jobs - Europe **Nutrition:** Supplements & Nutrition - Europe | Supplements & Nutrition - North America **Pharmaceutical:** Pharmaceutical Technology | Contract Research, Manufacturing & Clinical Trials **Cosmetics:** Cosmetics Formulation & Packaging in North America | Cosmetics Formulation & Packaging in Europe

[About us](#) | [Site map](#) | [All sites](#) | [Recommend this Site](#) | [Advertise](#) | [Contact the Editor](#) | [Terms & Conditions](#) | [Privacy and Cookies Policy](#)